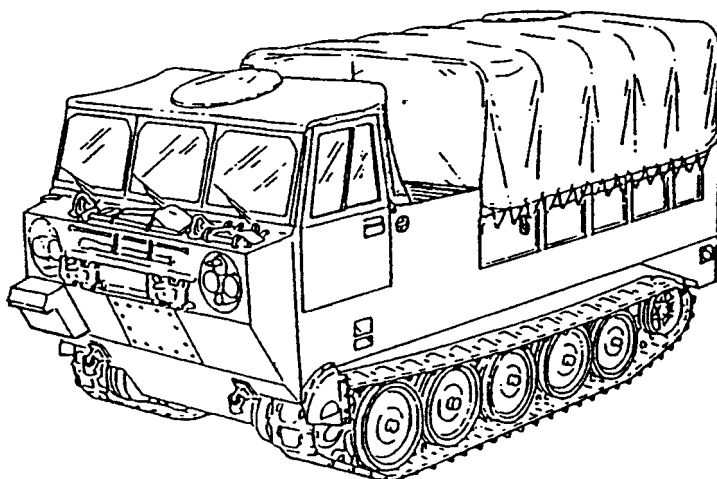

TECHNICAL MANUAL

DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL

FOR

CARRIER, CARGO, TRACKED, 6-TON M548A1
2350-00-096-9356 (EIC AEU)

M548A3
2350-01-369-6081 (EIC AE9)



SUPERSEDURE NOTICE — This manual supersedes TM 9-2350-247-34 dated August 1994, including all changes.

DISTRIBUTION STATEMENT A — Approved for public release; distribution is unlimited.

HEADQUARTERS, DEPARTMENT OF THE ARMY

30 June 2001

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 30 June 2001

TECHNICAL MANUAL

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REPORTING 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. Submit your DA Form 2028-2 (Recommended Changes to Equipment Technical Publications), through the Internet, on the Army Electronic Produce Support (AEPS) website. The Internet address is <http://aeps.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 email your letter, DA Form 2028 or DA Form 2028-2 direct to: Commander, U.S. Army Tank-automotive and Armaments Command, ATTN: AMSTA-LC-CIP-WT (Tech Pubs Control Point), Rock Island, IL 61299-7630. The email address is TACOM-TECH-PUBS@ria.army.mil. The fax number is DSN 793-0726 OR Commercial (309) 782-0726.

SUPERSEDEURE NOTICE — This manual supersedes TM 9-2350-247-34 dated 15 August 1994, including all changes.

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HOW TO USE THIS MANUAL

HOW TO USE THIS MANUAL

This manual tells you how to perform direct and general support maintenance for the M548A1 and M548A3 carriers.

Before starting a task or procedure, read HOW TO USE THIS MANUAL and the GENERAL MAINTENANCE PROCEDURES section of the PMCS (WP 0005 00).

WHAT'S IN THE MANUAL — FRONT TO BACK

This TM supplement is divided into front and rear matter and Work Packages (WPs) for ease of use.

The WARNING SUMMARY section provides safety and first aid information. This section includes general warnings not found in the TM text and a list of the most important detailed warnings extracted from the WPs. All of these warnings cover hazards that could kill or injure personnel.

The TABLE OF CONTENTS lists the WPs.

CHAPTER 1 covers general introductory information with theory of operation. The Equipment Description WP gives a brief description of major parts and features of the carriers. The Theory of Operation WP provides information that will help you understand how the carrier components work.

CHAPTER 2 includes general maintenance procedures for PMCS and general maintenance instructions.

CHAPTER 3 contains maintenance WPs for the engine system.

CHAPTER 4 contains maintenance WPs for the fuel system.

CHAPTER 5 contains maintenance WPs for the cooling system.

CHAPTER 6 contains maintenance WPs for the electrical system.

CHAPTER 7 contains maintenance WPs for the transmission.

CHAPTER 8 contains maintenance WPs for the transfer and final drive assemblies.

CHAPTER 9 contains maintenance WPs for the wheels and tracks.

CHAPTER 10 contains maintenance WPs for the shock absorbers.

CHAPTER 11 contains maintenance WPs for the hull.

CHAPTER 12 contains maintenance WPs for the winch (M548A1).

CHAPTER 13 contains maintenance WPs for the hull accessory items.

CHAPTER 14 contains maintenance WPs for tools and test equipment.

CHAPTER 15 contains maintenance WPs for special purpose kits.

CHAPTER 16 contains supporting information for the TM which includes the following WPs:

The REFERENCES WP lists references to be used by personnel in operating and maintaining the carrier.

The EXPENDABLE/DURABLE SUPPLIES and MATERIALS lists the expendable supplies and materials used to maintain or repair the carrier.

The COMMON TOOLS and SUPPLEMENTS and SPECIAL TOOLS/FIXTURES WP lists the tools used in the initial setup.

The FABRICATED TOOLS WP lists instructions for making tools authorized to be fabricated at DS or GS maintenance levels.

The INDEX is an alphabetical listing of all the tasks in the WPs of this TM. Each entry is cross-referenced to the WP number and page number.

DA FORM 2028 is used to report errors and to recommend improvements for procedures in this manual. Three blank DA Forms 2028 are in the back of this manual. A sample is provided to show you how to fill out the DA Form 2028.

The back cover includes a METRIC CONVERSION CHART that can be used to convert U.S. customary measurements to their metric equivalents. Measurements in this manual are given in U.S. customary unit with metric units in parentheses.

HOW TO USE THIS MANUAL (cont)

HOW TO USE THE WORK PACKAGES

How to find the WP you need

Pick a key word from the carrier part or system to be used during the WP. Look in the INDEX for this key word or the name of the action you will perform. Turn to the page indicated.

The INDEX lists each WP under one or more headings. For example, the WP titled INSTALL ENGINE COOLANT HEATER could be found under the two headings, “Coolant heater”, and “Heater”.

How to read the WP

Be sure to read all **warnings**, **cautions** and **notes**. These are in all types of WPs. They help you avoid harm to yourself, other personnel and equipment. They also tell you things you should know about the WP.

Before starting, get all tools, supplies, and personnel, listed on the setup page needed to do the WP. Be sure to read the WP before performing the maintenance. If any other WPs are referenced, you must go to the setup page for each of those WPs to find out what tools, parts, and materials will be needed.

Start with step 1 and do each step in given order.

Look at the illustrations. These show you what to look for when reading a maintenance WP.

Maintenance Instructions WPs

Doing maintenance WPs will keep the carrier in shape to operate. Maintenance WPs are used to present maintenance instructions. Each maintenance WP details steps which you need to perform. If the carrier and parts need maintenance that is not included in any WP in the manual, report this to your supervisor.

Read the INITIAL SETUP section carefully before you start a WP. Get the tools and supplies listed and the personnel needed to perform the WP. Be sure that the equipment is in the condition required.

DEFINITION OF WP TERMS

WARNINGS, CAUTIONS, AND NOTES

Be sure to read all warnings and cautions in the WP. Ignoring a warning could cause death or injury to yourself or other personnel. Ignoring a caution could cause damage to equipment. Notes contain facts to make the WP easier. Warnings, cautions, and notes always appear just above the WP step to which they apply.

WARNINGS	Call attention to things that could kill or injure personnel. Warnings are also listed in the Warning Summary section (page a).
CAUTIONS	Call attention to actions or materials that could damage equipment.
NOTES	Contain important facts to make the procedure easier.

HELPER

Helpers are needed for WPs that require more than one person such as lifting heavy objects or acting as an observer.

If a helper is needed to perform a procedure, the INITIAL SETUP will list “Helper” under the PERSONNEL REQUIRED heading.

If helper assists with a step, the step will include: “Have helper assist”.

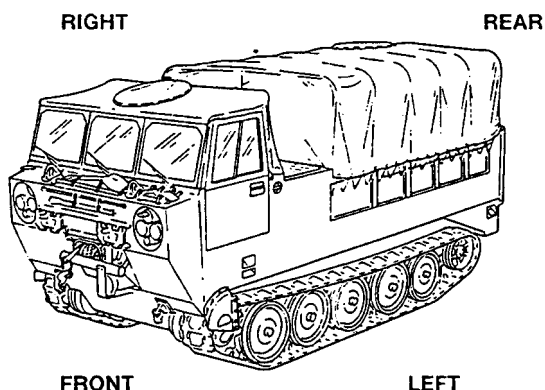
If a helper performs the action alone, the step will start with “HELPER”.

Locational Terms

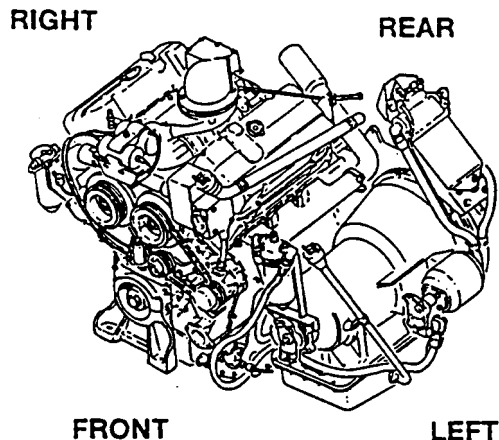
The terms “front”, “rear”, “left”, and “right” are used to indicate where items are located. The POINT OF REFERENCE FOR THESE TERMS IS DIFFERENT FOR CARRIER ITEMS AND POWER UNIT ITEMS. (Carrier items are items which are not on the power unit. Power unit items are items on the engine or transmission).

HOW TO USE THIS MANUAL (cont)

If you are working with carrier items, use this point of reference. Think of the location as if you were sitting in the driver's seat looking out the hatch.



If you are working with power unit items, use this point of reference. Think of the locations as if you were standing at the transmission end of the power unit and facing the flywheel. This rule applies whether the power unit is IN or OUT of the carrier.



M548A1 SHOWN

REFERENCES

References within a WP refer to a different manual or to another WP in the same manual. A step in one WP may be a complete WP someplace else. Below is an example of a reference step from the WP: INSTALL ENGINE COOLANT HEATER KIT.

Example: Lower power plant grill (see your -20).

The tools needed to do the task will be listed in that task.

MATERIALS/PARTS

For all WPs, the following comments apply:

Parts which are listed on the setup page will be referred to as "new" in the WP setup when installed.

Examples are: "lock nuts", "lock washers", "cotter pins", and some "gaskets".

These and other new parts are listed under MATERIAL/PARTS in the initial set up.

HOW TO USE THIS MANUAL (cont)

GENERAL MAINTENANCE

Cleaning, inspecting, checking for leaks, and similar procedures which apply to most WPs are found in the GENERAL MAINTENANCE PROCEDURES section of the PMCS (WP 0005 00). Use these steps to clean and inspect any part being removed, repaired, or installed. Special cleaning will be covered in the WP step.

HOW TO USE THE REPAIR PARTS AND SPECIAL TOOLS LISTS (RPSTL) WITH THIS MANUAL

The RPSTL TM 9-2350-247-24P gives the National Stock Number (NSN) required to order parts use in the maintenance WPs. To use the RPSTL to identify and order a part, do the following:

In this manual, turn to the first page of the WP to be performed.

Find Materials/Parts under INITIAL SETUP, and read the part(s) that need replacement. If required, find the illustrated part in the WP steps.

Go to the RPSTL and find the same illustrated part. That part will have an item number assigned to it. Look this item number up in the listing for that figure. The NSN can be found in the National Stock Number and Part Number Index in the back of the RPSTL.

If you inspect an item and find that it is damaged, go to the RPSTL and find the SMR code for the item. If the SMR code does not authorize you to repair the item, reassemble it and send it to the authorized level of maintenance.

OTHER MANUALS

The following maintenance manuals are used in support of carriers.

TM 9-2815-205-34 and TM 9-2815-205-34P are used for engine repair.

TM 9-2520-254-34 and TM 9-2520-254-34P are used for A1 transmission repair.

TM 9-2520-272-34&P is used for A3 transmission repair.

TM 9-2520-238-34 and TM 9-2520-238-34P are used for gearbox repair.

TM 9-2920-225-34 and TM 9-2920-225-34P are used for 100 amp generator repair.

TM 9-2920-257-30&P is used for 200 amp generator repair.

CHAPTER 1

DIRECT SUPPORT INTRODUCTORY INFORMATION WITH THEORY OF OPERATION

WORK PACKAGE INDEX

<u>Title</u>	<u>Sequence No.</u>
GENERAL INFORMATION.....	0001 00
EQUIPMENT DESCRIPTION AND DATA.....	0002 00
THEORY OF OPERATION.....	0003 00
REPAIR PARTS, SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT.....	0004 00

GENERAL INFORMATION

0001 00**SCOPE**

Type of Manual: Direct and General Support Maintenance

Equipment Model Number, Name, and Purpose:

M548A1 – Carrier, Cargo, Tracked, 6-ton

M548A3 – Carrier, Cargo, Tracked, 6-ton

MAINTENANCE FORMS, RECORDS, AND REPORTS

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA Pamphlet 738-750, The Army Maintenance Management System (TAMMS).

REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)

If your carrier 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. Put it on an SF 368 (Quality Deficiency Report). Mail it to us at: Commander, US Army Tank-Automotive and armaments Command, ATTN: AMSTA-TR-QCL, Warren, MI 48397-5000. A reply will be sent to you.

DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE

See the following technical manuals for information on destruction of Army materiel:

TM 750-244-2 Procedures for Destruction of Electronics Materiel to Prevent Enemy Use.

TM 750-244-5-1 Procedures for Destruction of Conventional Ammunition and Improved Conventional Munitions to Prevent Enemy Use.

TM 750-244-6 Procedures for Destruction of Tank Automotive Equipment to Prevent Enemy Use.

TM 750-244-7 Procedures for Destruction of Equipment in Federal Supply Classifications 1000, 1005, 1010, 1520, 2530, 5590, 5595 to Prevent Enemy Use.

PREPARATION FOR STORAGE OR SHIPMENT

See MIL-C-62015 for information about administrative storage or shipment of the M548A1 and M548A3 carriers.

NOMENCLATURE CROSS-REFERENCE

This listing includes nomenclature cross references used in this manual.

Lock nut	Self-locking nut
Lock screw	Self-locking bolt
Lock wire	Nonelectrical wire

LIST OF ABBREVIATIONS / ACRONYMS

Many abbreviations are used in this manual. They are listed below. Learn what each one means. It will make your job easier.

A	After
B	Before
BATT	Battery
BO	Blackout
BRT	Bright
CB	Circuit Breaker or common battery
COEIL	Components of end items list

GENERAL INFORMATION — Continued

0001 00

CVC	Combat Vehicle Communications
D	During
ENG	Engine
FOV	Field-of-view
GEN	Generator
HI TEMP	High Temperature
Intercom	Intercommunication
IR	Infrared
NBC	Nuclear, biological and chemical
N2	Nitrogen gas
OVE	On Vehicle Equipment
PMCS	Preventive Maintenance Checks and Services
PRESS	Pressure
TEMP	Temperature
TRANS	Transmission
Vent	Ventilation
W	Weekly

SAFETY, CARE, AND HANDLING

Read the Warnings in the Warning Summary in the front of the TM.

EQUIPMENT DESCRIPTION AND DATA

0002 00

For equipment characteristics, capabilities, and features, see your -10.

LOCATION AND DESCRIPTIONS OF MAJOR COMPONENTS

For location and description of major components, see your -10.

For differences between models, see your -10.

For equipment data, see your -10.

THEORY OF OPERATION

0003 00

For a brief description of principles of operation and equipment, see your -10.

REPAIR PARTS, SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

0004 00**COMMON TOOLS AND EQUIPMENT**

For authorized common tools and equipment, see the Modified Table of Organization and Equipment (MTOE) for your unit. Common tools and equipment needed for the maintenance procedures in the manual are listed in WP 0078 00.

SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

Special tools, TMDE, and support equipment needed for the maintenance procedures in this manual are listed in WP 0078 00. Special tools are also cataloged in the Repair Parts and Special Tools List (RPSTL) TM 9-2350-247-24P. Additional TMDE and special tools are listed in your TM 9-2350-247-20.

FABRICATED TOOLS

Some tools needed for specialized maintenance procedures are not available in the supply system. These tools are normally fabricated locally by the unit doing the maintenance. Fabrication instructions for these tools are given in WP 0079 00.

REPAIR PARTS

Repair parts are listed and illustrated in the Repair Parts and Special Tools List (RPSTL) TM 9-2350-247-24P. Maintenance and supply personnel can order them.