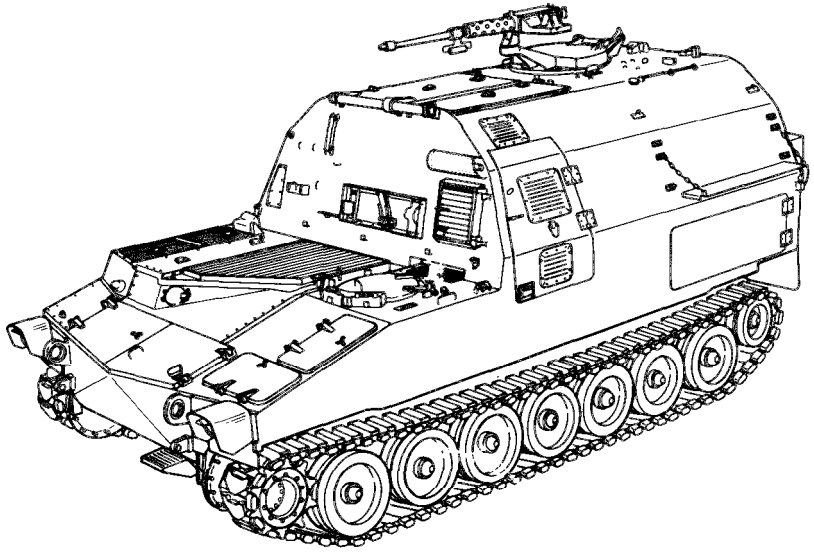
DEPARTMENT OF THE ARMY
TECHNICAL MANUAL

DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL

FOR

HULL, POWERPACK, DRIVE CONTROLS, TRACKS, SUSPENSION AND ASSOCIATED COMPONENTS

CARRIER, AMMUNITION, TRACKED



M992

(NSN 2350-01-110-4660)

TM 9-2350-267-34

TA309655

OCTOBER 1985

TECHNICAL MANUAL
TM 9-2350-267-34

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington .D.C., *28 October 1985*

DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL

FOR

CARRIER, AMMUNITION, TRACKED

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(NSN 2350-01-110-4660)

REPORTING OF ERRORS

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 or DA Form 2028-2 directly to Commander, U.S. Army Tank-Automotive Command, ATTN: AMSTA-MBC, Warren, MI 48397-5000. A reply will be furnished to you.

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HOW TO USE THIS MANUAL

GENERAL

This manual contains direct and general support maintenance procedures for the M992.

Chapter 1 contains general information.

Chapter 2 contains the following:

- Special tools list
- Troubleshooting procedures
- General maintenance procedures

Chapters 3 through 12 contain instructions for repair of direct and general support components.

IMPORTANT

Read, and be sure you understand the entire maintenance procedure before beginning any maintenance task.

Also, read the general information in Chapter 1 (p 1-1) and the general maintenance procedures (p 2-16).

SAMPLE PROBLEM

How do I repair the suspension system?

A Look at the index (p Index-4) for ROADWHEEL ARM ASSEMBLY-UPPER SPINDLE.

B Turn to the page listed (p 7-15) and follow the repair instructions.

The engine vibrates excessively. How do I find what is wrong?

A Turn to the quick guide to troubleshooting (p 2-3). Find the name of the item that doesn't work (ENGINE).

B Find the problem with the item (VIBRATES EXCESSIVELY).

C Turn to the page referenced for troubleshooting (p 2-5).

D Follow the troubleshooting steps until you find what is wrong (DAMAGED VIBRATION DAMPER).

E Turn to the page referenced for repair of the damaged component or follow the instructions.

CHAPTER 1
INTRODUCTION

CHAPTER OVERVIEW

This chapter provides the mechanic with basic information on the M992. It contains a physical description of the major components which the technician is required to maintain, service, inspect and replace or repair.

Reference and guidance information is provided on the use of forms, maintenance of records and filing of reports (p 1-2).

This chapter consists of the following sections:

Section I General Information

Section II Description and data

Section I GENERAL INFORMATION

SCOPE

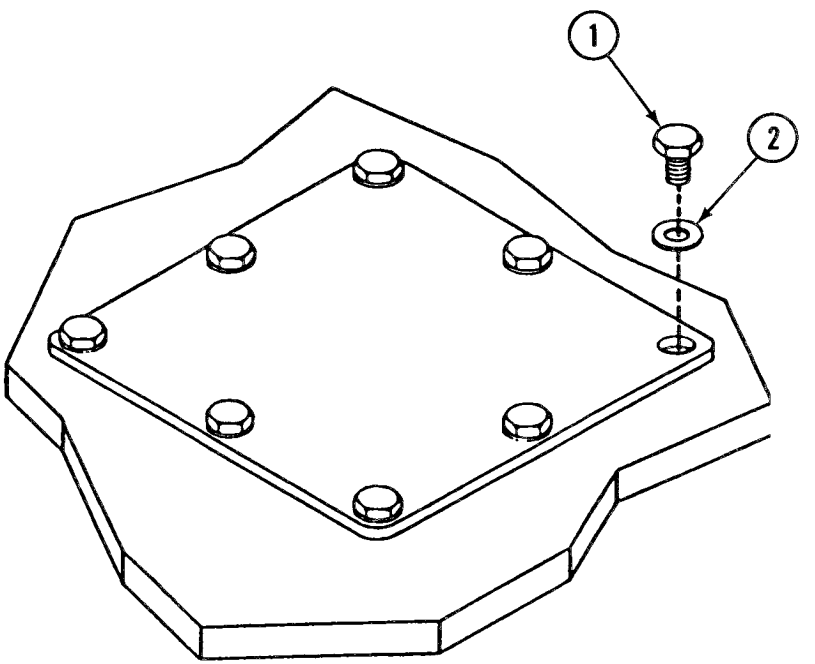
A This technical manual has instructions for Direct/General Support Maintenance of the Carrier, Ammunition, Tracked M992.

B Steps in which maintenance procedures are to be performed are indicated by letters: step A is performed before step B, and B before C. Step AA follows step Z.

C Text and illustrations use numbers to help you identify parts. Example: to tell how to remove the screws and washers in the picture to the right, your instructions would be:

- Remove eight screws (1) and eight washers (2).

D Dotted lines on illustrations indicate where parts are located.



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APPENDIX A is a list of current references, including supply manuals, forms and other applicable publications.

APPENDIX B lists the Expendable Supplies and Materials required to support the M992 maintenance functions.

APPENDIX C lists the torque limits for the M992.

APPENDIX D lists the common tools and supplements and special tools/fixtures for the M992 maintenance functions.

APPENDIX E is an illustrated list of manufactured items for the M992. It includes complete instructions for making items authorized to be manufactured or fabricated at direct and general support maintenance.

MAINTENANCE FORMS, RECORDS AND REPORTS

Refer to DA Pam 738-750, The Army Maintenance Management System, for the listing of authorized Department of the Army forms and for instructions on how to use these forms.

Accidents involving injury to personnel or damage to materiel will be reported on DA Form 285 (Accident Report) in accordance with AR 385-40.

Explosive ammunition malfunctions will be reported in accordance with AR 75-1.

METRIC TOOLS

The M992 vehicle described in this manual is non-metric; metric tools are not required.

REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR's)

EIRs must be submitted by anyone who is aware of unsatisfactory equipment design or operation. It is not necessary to show a new design or list a better way to perform a procedure. Tell why the procedure is unfavorable or difficult. EIR's will be submitted on Standard Form 368. Mail directly to Commander, U.S. Army Tank-Automotive Command, ATTN: AMSTA-Q, Warren, MI 48090.

NOTE

When equipment failure occurs that is not caused by normal wear, poor operation, or accident, you must submit an Equipment Improvement Recommendation.

ADMINISTRATIVE STORAGE

Basic requirements for administrative storage are covered in TM 740-90-1.

DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE

Refer to TM 750-244-6 for procedures on how to destroy the M992.

Section II EQUIPMENT DESCRIPTION AND DATA

DESCRIPTION

The description of the M992 and major components is contained in TM 9-2350-267-10 and TM 9-2350-267-20.

DATA

Data relative to the M992 equipment and configuration are contained in TM 9-2350-267-20.

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CHAPTER 2
DIRECT SUPPORT AND GENERAL SUPPORT INTEGRATED MAINTENANCE

CHAPTER OVERVIEW

This chapter contains procedures and guidance for performing maintenance functions. References are also provided for maintenance procedures not within the scope of this manual (eg, welding).

This chapter consists of the following sections:

Section I Repair Parts, Special Tools, TMDE and Support Equipment
Section II Troubleshooting
Section III General Maintenance

Section I REPAIR PARTS, SPECIAL TOOLS, TMDE AND SUPPORT EQUIPMENT

COMMON TOOLS AND EQUIPMENT

Standard and commonly used tools and equipment having general application to hull items are authorized by Tables of Allowances (TA) and Tables of Organization and Equipment (TOE).

SPECIAL TOOLS AND SUPPORT EQUIPMENT

The special tools and equipment listed and illustrated in TM 9-2350-267-34P are the only special tools and equipment necessary to perform maintenance operations described in this manual. TM 9-2350-267-34P is the authority for requisitioning special tools and equipment for supporting maintenance use.

REPAIR PARTS

Repair parts are listed and illustrated in the Repair Parts and Special Tools List (RPSTL) covering direct support and general support maintenance for this equipment (TM 9-2350-267-34P).

FABRICATED TOOLS

NOTE

Fabricated tools are not available for issue.

The fabricated tools listed in this manual are of particular value to shops engaged in repairing a number of identical components. The tools are listed in this manual to allow supporting maintenance shops to fabricate them locally.

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Section II TROUBLESHOOTING

GENERAL INSTRUCTIONS

NOTE

This manual does not cover crew or organizational maintenance. Refer to TM 9-2350-267-10 and TM 9-2350-267-20 if necessary.

This section contains troubleshooting and test and repair information for the M992 hull systems and components.

Before starting troubleshooting procedures make sure the problem is real. Perform basic system tests as listed in TM 9-2350-267-20. Make sure electrical or hydraulic power is on when needed.

Use the Quick Guide to Troubleshooting (p 2-3) and the troubleshooting chart (p 2-5) by following the instructions below:

(A) Find the name of the item that doesn't work (eg ENGINE).

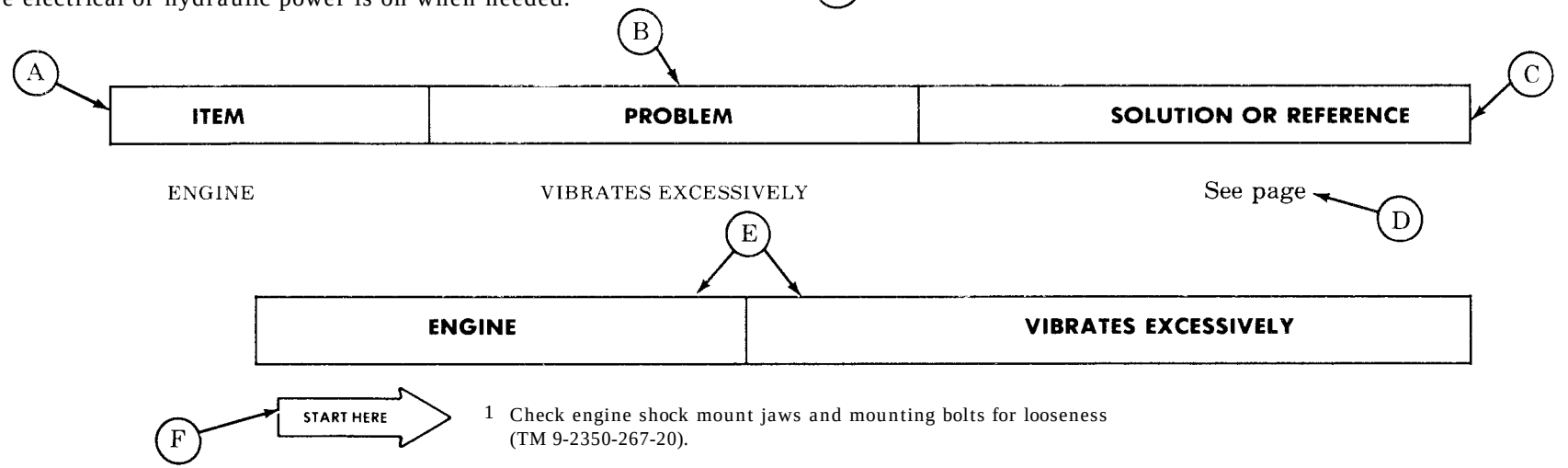
(B) Find the problem with the item (eg VIBRATES EXCESSIVELY).

(C) Find the solution to the problem.

(D) Turn to the referenced TM or page.

(E) Recheck the item and problem.

(F) Follow the steps to fix the item.



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QUICK GUIDE TO TROUBLESHOOTING

ITEM	PROBLEM	SOLUTION OR REFERENCE
ENGINE	VIBRATES EXCESSIVELY	See page 2-5
	BLACK EXHAUST	Refer to TM 9-2815-202-34
	WHITE EXHAUST	Refer to TM 9-2815-202-34
	USES TOO MUCH OIL	Refer to TM 9-2815-202-34
	HAS LOW OR NO OIL PRESSURE	Refer to TM 9-2815-202-34
TRANSMISSION	VIBRATES EXCESSIVELY	See page 2-5
	OVERHEATS	See page 2-6 and TM 9-2520-234-35
	VEHICLE DOESN'T DRIVE	Refer to TM 9-2520-234-35
	VEHICLE STEERS EASILY IN ONE DIRECTION ONLY	Refer to TM 9-2520-234-35
AIR CLEANER DUST BLOWER MOTORS	DO NOT OPERATE	see pag 2-6
	ENGINE LOSES POWER	See page 2-7
FUEL SYSTEM	FUEL LEAKAGE IN ENGINE COMPARTMENT	See page 2-7
FLAME HEATER	MOTOR AND PUMP ASSEMBLY DOESN'T OPERATE	See page 2-7
	INSUFFICIENT OR NO FUEL FLOW THROUGH THE FLAME HEATER SOLENOID-OPERATED VALVE	See page 2-8

QUICK GUIDE TO TROUBLESHOOTING (CONTINUED)

ITEM	PROBLEM	SOLUTION OR REFERENCE
COOLING SYSTEM	ENGINE OVERHEATS	See page 2-8
	ENGINE COOLING FANS DON'T OPERATE WHEN ENGINE IS RUNNING	See page 2-8
ELECTRICAL SYSTEM	ELECTRICAL COMPONENTS INOPERATIVE	See pages 2-9 through 2-11
FINAL DRIVE ASSEMBLY	EXCESSIVE OIL LEAKAGE AROUND FINAL DRIVE	See page 2-14
	DOESN'T TURN FREELY	See page 2-12
	DRIVE SPROCKETS DO NOT TURN WHEN POWER IS APPLIED TO FINAL DRIVE	See page 2-12
SUSPENSION SYSTEM	OIL LEAKS FROM UPPER SPINDLE HOUSING	See page 2-13
	SPINDLE HOUSING OVERHEATS	See page 2-13
BILGE PUMP	PUMP DOESN'T OPERATE WHEN MASTER AND BILGE PUMP SWITCHES ARE IN THE ON POSITION	See page 2-14
	PUMP OPERATES BUT DOES NOT PUMP SUFFICIENT WATER	See page 2-15
PERSONNEL HEATER	WILL NOT IGNITE/IMPROPER OPERATION	See page 2-15

ENGINE	VIBRATES EXCESSIVELY

START HERE

1 Inspect vibration damper (viscous) for damage.

2 Inspect mass ring and coupler for damage.
Repair or replace broken components as required.

3 If problem still exists, refer to TM 9-2815-202-34.

TRANSMISSION	OVERHEATS

START HERE

Check oil cooler core (TM 9-2520-234-35). Repair or replace oil cooler core.

AIR CLEANER DUST BLOWER MOTORS	DO NOT OPERATE

START HERE

1 Repair blower motor (p 4-30).

2 Check impeller housing for clogging (p 4-30).

WARNING

Use low pressure air and wear approved eye protection.

3 Check for damaged impeller (p 4-31).

Replace impeller if damaged.

AIR CLEANER DUST BLOWER MOTORS	ENGINE LOSES POWER

START HERE

1 Check impeller housing outlet for blockage (p 4-30).

WARNING

Use low pressure air and wear approved eye protection.
Clean housing outlet and chamber.

2 Inspect for weak or damaged impeller (p 4-31).

Replace impeller as required.

FUEL SYSTEM	FUEL LEAKAGE IN ENGINE COMPARTMENT

START HERE

Inspect fuel tanks for damage, deterioration or cracks (p 4-10).

Repair or replace fuel tanks as appropriate (p 4-10 and 4-20.1).

FLAME HEATER	MOTOR AND PUMP ASSEMBLY DOESN'T OPERATE

START HERE

1 Repair or replace motor and pump assembly as appropriate (TM 9-2815-202-34).

2 Replace ignition unit (coil) (TM 9-2815-202-34).