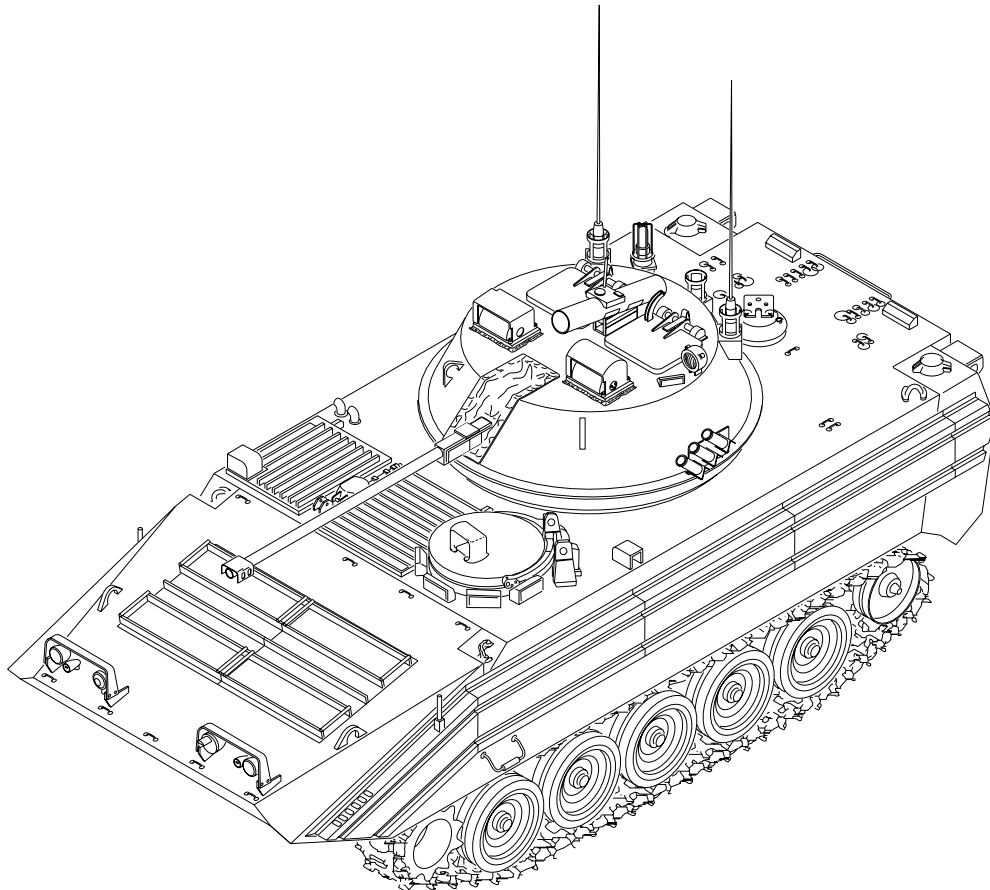


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TECHNICAL MANUAL

UNIT MAINTENANCE MANUAL

**FOR
OPPOSING FORCES SURROGATE VEHICLE (OSV)
M113A3/BMP-2
6920-01-420-4716 (EIC AUK)
HULL**



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HEADQUARTERS, DEPARTMENT OF THE ARMY

26 July 2001

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 26 JULY 2001

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REPLACE DRIVER’S SEAT BACK ASSEMBLY.....	0361 00
REPAIR DRIVER’S SEAT BACK ASSEMBLY.....	0362 00
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REPLACE DRIVER’S SEAT POST ASSEMBLY.....	0364 00
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HOW TO USE THIS MANUAL

HOW TO USE THIS MANUAL

The safest, easiest, and best way to care for, operate, and maintain the OSV is to use this manual. Learning to use this manual is as easy as reading it. Knowing what is in this manual and how to use it will save you time. Becoming familiar with the work, procedures, and cautions will help you in your job and reduce your exposure to unnecessary hazards.

WHERE DO YOU START

This TM is divided into chapters and front and rear matter. The chapters are further divided into Work Packages (WPs). Go to the area within the manual that covers what you are to do and follow the instructions. Be sure to read and follow the Warnings, Cautions and Notes.

HOW THIS MANUAL IS ORGANIZED

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 in each chapter.

CHAPTER 1 covers General Information, Location and Description, Equipment Data and Theory of operation. The Equipment Description WP gives a brief description of major parts and features of the vehicle. The Theory of Operation WP provides information that will help you understand how the vehicle components work.

CHAPTER 2 contains the troubleshooting procedures that are used to find the cause of vehicle malfunctions.

CHAPTERS 3 through 38 include the maintenance WPs.

The INDEX is an alphabetical listing of all the major controls, procedures, indicators, systems, and subsystems covered in this manual. 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.

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 units with metric units in parentheses.

HOW TO USE THE WORK PACKAGES

Pick a key word from the vehicle part or system to be used. Look in the INDEX for this key word or the name of the action you will perform. The INDEX lists each WP under one or more headings. Each entry is cross-referenced to the WP number. Go to the WP indicated.

How to read the WP

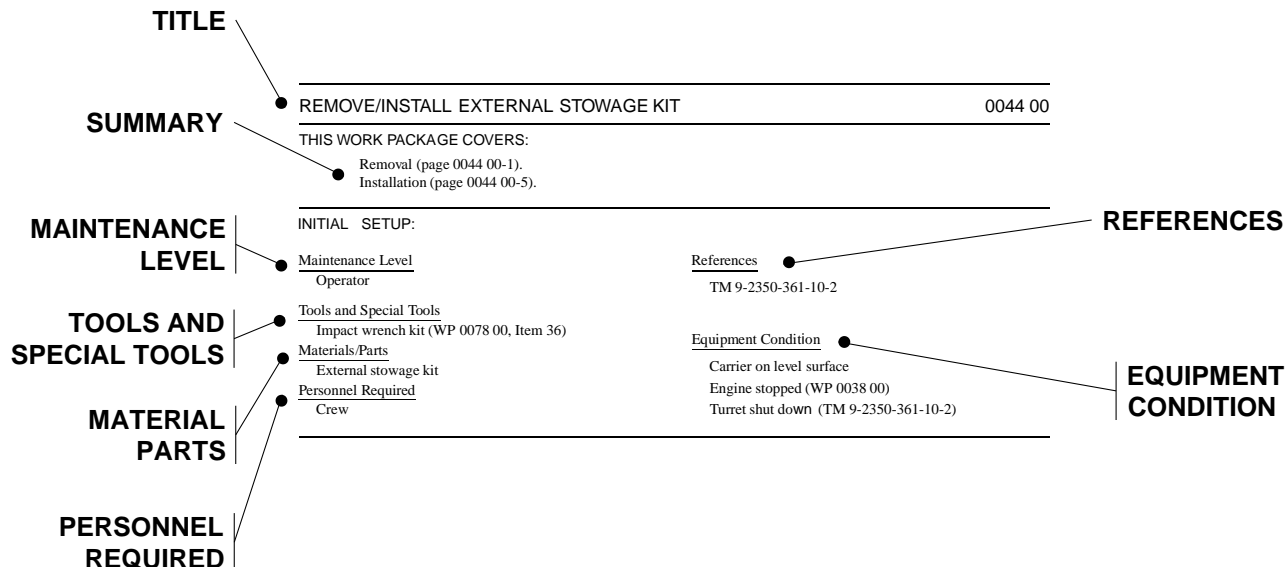
WPs provide either descriptive/supporting information or detailed procedures for operating and maintaining the equipment.

Pay attention to all **warnings**, **cautions** and **notes**. These can appear in all types of procedures. They help you avoid harm to yourself, other personnel, and equipment. They also tell you things you should know about the procedure.

Before you start a procedure, get all the tools, supplies, manuals, and personnel you need to do the procedure. These items will be listed in the INITIAL SETUP of the WP.

HOW TO USE THIS MANUAL (cont)

Read the INITIAL SETUP section carefully before you start any procedure. Make sure you have the required MATERIALS/PARTS needed to do the task such as sealants, gaskets, lockwashers or other parts. See sample below:



INITIAL SETUP LEGEND

TITLE	The name of the procedure.
SUMMARY	A listing of the general actions to be performed, cross-referenced to the page where each action begins.
MAINTENANCE LEVEL	The level of maintenance authorized to perform the procedures in the WP.
TOOLS AND SPECIAL TOOLS	The tools and equipment needed to do the procedures in the WP.
MATERIALS/PARTS	The supplies and parts needed to do the procedures in the WP.
PERSONNEL REQUIRED	The personnel needed to do the procedures in the WP.
REFERENCES	Other WPs, TMs, and publications you will need to do the procedures in the WP.
EQUIPMENT CONDITION	Any special equipment conditions required before the procedure can be started.

Start with step 1 and do each step in the order given. Numbered steps tell you what to do.


Look at the illustrations. Locators show you where the equipment and parts are located on the vehicle. Closeup illustrations show the details you need to do the procedure.

HOW TO USE THIS MANUAL (cont)

The words END OF TASK will tell you when you have finished the procedure. See sample below:

STOW/UNSTOW STINGER MISSILES	Continued	0011 00
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WARNING



Unsecured missiles can fall and strike personnel during vehicle operation.
Make sure stowage clamps securely hold missiles.

CAUTION

No BCU s shall be installed in missiles when missiles are stowed in racks. BCU s shall not be installed in missiles until after soldiers exit carrier.
Missiles in cases are easily damaged. Handle missile cases with care. Do not drop missiles. Do not step on missiles.

NOTE

M6 carriers hold maximum of six STINGER missiles. Four are stowed equipped with gripstocks and two are stowed without gripstocks.
Upper and middle missile racks are raised and lowered the same way.
Check position of missiles every 200 miles. Reposition missiles and/or adjust straps as required.

STEP

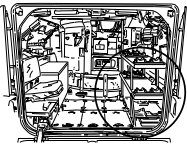
2. RAISE UPPER AND MIDDLE RACKS.

WARNING

CAUTION

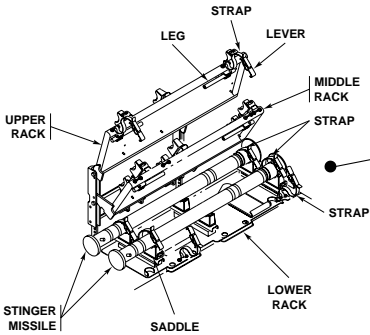
NOTE

LOCATOR



SUBSTEP

a. Lift up two levers to release two straps on rack.



CLOSE-UP

MAINTENANCE STEPS LEGEND

STEP	This tells you WHAT to do.
SUBSTEP	This tells you HOW to do it.
WARNING	This describes some danger to yourself and other personnel.
CAUTION	This describes possible damage to equipment.
NOTE	This gives you additional information which may not be obvious the first time you do the procedure.
LOCATOR	An illustration that locates the equipment on the hull.
CLOSEUP	A detailed illustration of the equipment.

Preventive Maintenance Checks and Services (PMCS) WP

The PMCS procedures are performed on a daily, weekly, and monthly basis to keep the vehicle operating properly.

There are five types of PMCS for the vehicle, as follows:

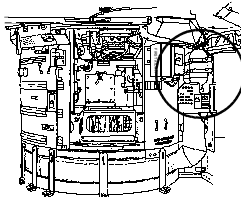
The **BEFORE (B)** PMCS must be done before you operate the vehicle.

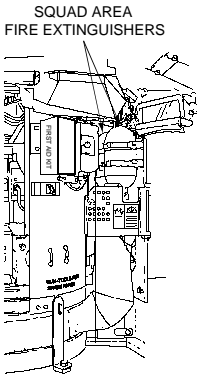
The **DURING (D)** PMCS must be done when you operate the vehicle. Monitor the vehicle systems as you perform your mission. Perform **DURING (D)** PMCS on a system only when the system is required to complete your mission.

HOW TO USE THIS MANUAL (cont)

The AFTER (A) PMCS must be done after completing your mission.
 The WEEKLY (W) PMCS must be done weekly.
 The MONTHLY (M) PMCS must be done monthly.

MAN-HOUR		CREWMEMBER		EQUIPMENT NOT READY/AVAILABLE IF:	
ITEM NUMBER	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
19	Before		Internal Fire Extinguisher	ASSISTANT GUNNER a. Check that pressure gauges on both squad area fire extinguishers read at or above minimum pressure on chart. Estimate temperature in squad area.	Pressure gauge on squad area fire extinguisher reads below pressure shown on chart.





SQUAD AREA
FIRE EXTINGUISHERS

LEGEND

- ITEM NUMBER** This is the sequence for doing the PMCS.
- INTERVAL** This tells you when to perform the PMCS check.
- MAN-HOUR** When equipment must be lubricated, this tells you the man-hours that will be required for the lubrication procedure.
- ITEM TO BE CHECKED OR SERVICED** The name of the OSV system or component being checked.
- CREWMEMBER** This tells you which crewmember/mechanic must perform the check.
- PROCEDURE** This tells you what needs to be done.
- EQUIPMENT NOT READY/AVAILABLE IF:** This tells you what conditions make the OSV NOT READY/AVAILABLE. These conditions will have to be corrected before the system is capable of performing its primary mission.

HOW TO USE THIS MANUAL (cont)

DEFINITION OF WP TERMS

Warnings, Cautions, And Notes

Pay attention to all warnings and cautions within 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 procedure easier. Warnings, cautions, and notes always appear just above the 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 in the front of the manual.
CAUTIONS	Call attention to actions or materials that could damage equipment.
NOTES	Contain important facts to make the procedure easier.

Helper

Helpers are needed in procedures that require more than one person. A helper may be needed to help lift objects or act as an outside observer.

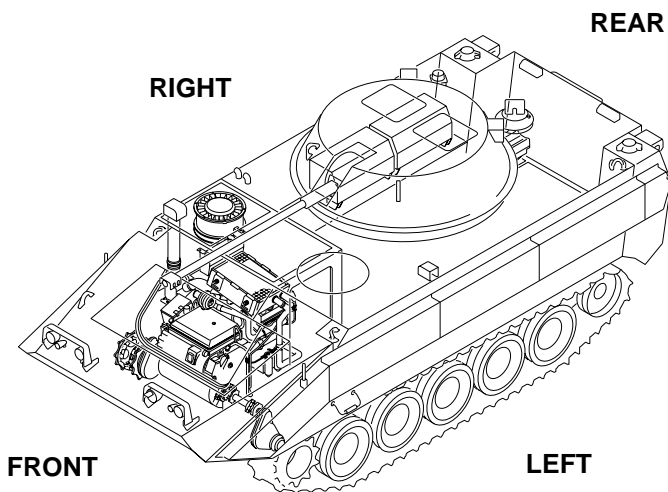
If a helper is needed to perform a procedure, the INITIAL SETUP will list “Helper (H)” under the PERSONNEL REQUIRED heading.

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

If a helper performs the action alone, the step will start with “(H):”.

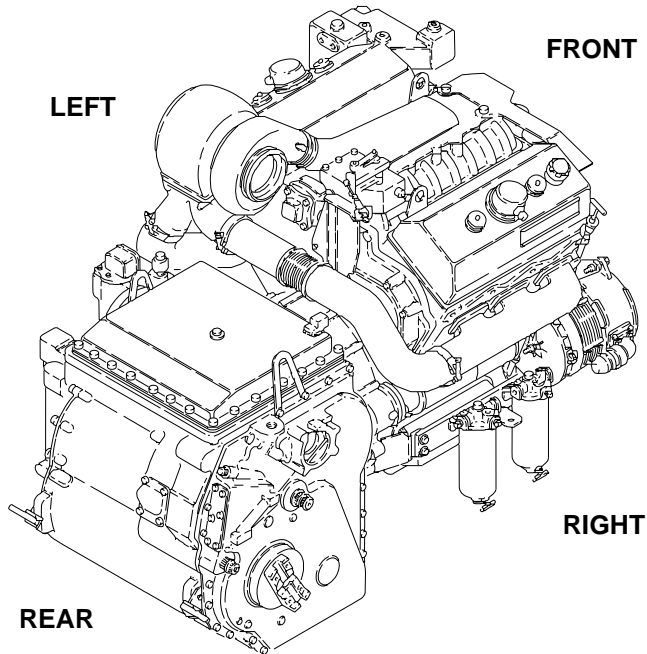
LOCATION TERMS

The terms “front”, “rear”, “left”, and “right” are used to indicate where items are located on the vehicle. Think of these locations as if you were standing behind the vehicle facing the inside of the vehicle or sitting in the vehicle facing the 30mm gun.



HOW TO USE THIS MANUAL (cont)

If you are working with power unit items think of the location as if you were standing at the end of the transmission facing the engine flywheel. This point of reference applies whether the engine is in or out of the vehicle.



REFERENCES

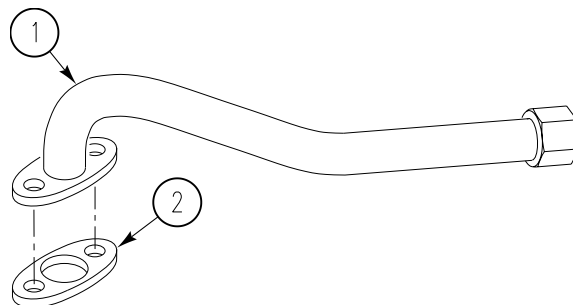
References within a task refer to a different manual or to another task in the same manual. They are found in the Initial Setup and in task steps. Two frequent WP references are:

MASTER SWITCH OFF (TM 9-2350-366-10-1)

Battery ground lead disconnected (WP 0237 00)

GENERAL MAINTENANCE

Cleaning, inspecting, checking for leaks, and similar procedures which apply to most tasks are found in WP 0401 00, GENERAL MAINTENANCE INSTRUCTIONS. Use the steps in that WP to clean and inspect any part being removed, repaired, or installed. Special cleaning, if required, will be covered in the WP task. Below is a step that would require general cleaning.



5. REMOVE GASKET (2) FROM UPPER TUBE FLANGE (1)

After doing this step, clean the mating surface of the tube flange with cleaning compound and a wiping rag in accordance with WP 0401 00. In other tasks, hoses or rubber seals would need to be checked for leaks or damage.

HOW TO USE THIS MANUAL (cont)

HOW TO USE THE REPAIR PARTS AND SPECIAL TOOLS LIST (RPSTL)

The RPSTL TM 9-2350-366-24P-1 gives the National Stock Number (NSN) required to order parts used in maintenance tasks. To use the RPSTL to identify and order a part do the following:

1. In this manual, go to first page of task (WP) to be performed.
2. Find Materials/Parts under INITIAL SETUP and note the NSNs for parts that need replacement. If needed, find the illustrated part in the task steps.
3. Go to the RPSTL and find the same illustrated part. Look up the item number for that part in the listing for that figure. Use the figure and item number index to find the National Stock Number (NSN).
4. If you find a part 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.