

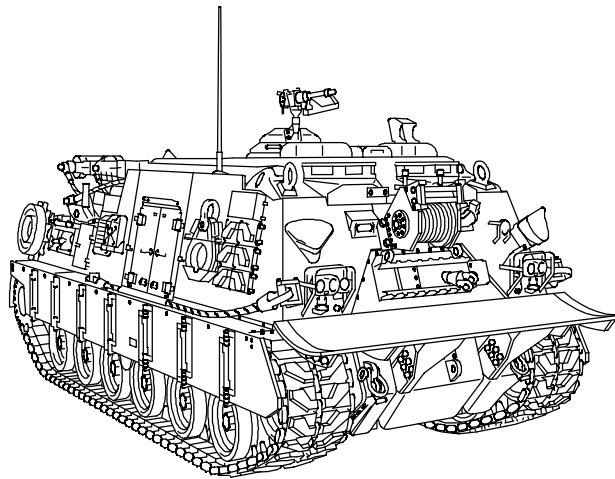
TM 9-2350-292-10
MARINE CORPS TM 07769B-10/1

TECHNICAL MANUAL

OPERATOR'S MANUAL

FOR

**RECOVERY VEHICLE, HEAVY,
FULL-TRACKED: M88A2
(NSN 2350-01-390-4683)
(EIC: ACQ)**



This manual supercedes TM 9-2350-292-10 dated July 1998.
Distribution Statement A: Approved for public release; distribution is unlimited.

01 JANUARY 2002
HEADQUARTERS, DEPARTMENT OF THE ARMY
HEADQUARTERS, U.S. MARINE CORPS

MARINE CORPS TM 07769B-10-1

HEADQUARTERS
DEPARTMENT OF THE ARMY
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WASHINGTON, D.C. 01 JANUARY 2002

TECHNICAL MANUAL

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RECOVERY VEHICLE, HEAVY, FULL-TRACKED:M88A2\
NSN 2350-01-390-4683 (EIC: ACQ)

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A reply will be furnished directly to you

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HOW TO USE THIS MANUAL

This manual was designed to provide you with the information you will need to operate and maintain the M88A2 recovery vehicle.

The information contained in this manual is presented in chapters and work packages. Each chapter is divided into work packages to cover the subject or operating procedures for the vehicle systems or components. Where references are made to tables, figures, and work packages, refer to those portions of the text.

To find information relating to a specific component or system:

- Determine the specific name or function of the component/system.
- Find the name or function in the Index Listing, located in the back of this manual.
- Refer to appropriate work package(s) called out in Index Listing.

To find information pertaining to a broader range of information (such as vehicle troubleshooting, preventive maintenance and vehicle descriptions):

- Identify the desired topic.
- Find the general topic in the Table of Contents, located in the front of this manual.
- Refer to appropriate work package(s) called out in the Table of Contents.

IMPORTANT

You must read and understand this manual BEFORE operating the M88A2 recovery vehicle.

MAINTENANCE

Throughout this manual you will frequently see "notify unit maintenance". When you are instructed to notify unit maintenance, do exactly that; they have the tools and training to efficiently and correctly perform the next level of maintenance.

Maintenance procedures are to be performed in the sequence shown in the text and illustrations. Step 1 must be performed before step 2 and so on.

Equipment illustrations use numbers to identify parts of the system/components.

Throughout this manual the words WARNING, CAUTION, and NOTE will appear. There is a reason for every one of them.

WARNING

A warning is used to alert the user to hazardous operating and maintenance procedures, practices, conditions, statements, etc. that may result in injury to or DEATH of personnel if not strictly observed.

CAUTION

A caution is used to alert the user of hazardous operating and maintenance procedures, practices, conditions, statements, etc. that may result in damage to or destruction of equipment or of mission effectiveness if not observed.

NOTE

A note is used to inform the user of essential information which is of special interest or importance or will aid the user in performing a job.

END OF TASK

GENERAL INFORMATION

0001 00

THIS WORK PACKAGE COVERS:General Information

SCOPE

Type of manual: Operator's Manual

Equipment Name and Model Number: Recovery Vehicle, Heavy, Full-Track, M88A2.

Purpose of Equipment: To provide for recovery (hoist/winch/tow) of vehicles weighing up to 70 tons (63.49 metric tons).

MAINTENANCE FORMS AND PROCEDURES

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA Pam 738-750, The Army Maintenance Management Systems (TAMMS) as contained in the Maintenance Management Update.

REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATION (EIR)

If your vehicle 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 or performance. Put it on a Standard Form 368 (Product Quality Deficiency Report). Mail it to Commander, U.S. Army Tank-automotive and Armament Command, ATTN: AMSTA-TR-QL, Warren, MI 48397-5000. We will send you a reply.

HAND RECEIPT (HR) MANUALS

This manual has a companion document with a TM number followed by "HR" (which stands for Hand Receipt). TM 9-2350-292-10-HR consists of preprinted hand receipts that list end item related equipment (i.e., COEI, BII and AAL) that must be accounted for. As an aid to property accountability, additional HR manuals may be requisitioned through normal publication channels.

CORROSION PREVENTION AND CONTROL (CPC)

Refer to page WP 0101 00 for detailed CPC information and reporting instructions.

DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE

Destruction of the vehicle, armament, and equipment when subject to capture or abandonment in a combat zone will be undertaken only when the unit commander decides such action is necessary in accordance with TM 750-244-6, Procedure for Destruction of Tank-Automotive Equipment to Prevent Enemy Use, orders of, or policy established by, the Army commander.

WARRANTY INFORMATION

Refer to Warranty Technical Bulletin, TB 9-2350-292-15.

PREPARATION FOR STORAGE OR SHIPMENT

Requirements for storage or shipment, including packaging and administrative storage, of the M88A2 Hercules vehicle can be found in ATP-D-2229.

GENERAL INFORMATION - CONTINUED**0001 00****NOMENCLATURE CROSS-REFERENCE LIST**OFFICIAL PROVISIONINGNOMENCLATURECOMMON NAME

Powerpack gauge	Dipstick, bayonet gauge, gauge rod
Seat cushion	Backrest
Seat, individual	Crew seat
Socket head screw key	Hex key
Wire rope	Cable
Crowbar	Tanker's bar
Chain, lifting, Heavy Duty	V-chain/combat chain

LIST OF ABBREVIATIONS

AAL	Additional Authorized List
BII	Basic Issue Item
°C	Degree Centigrade
CARC	Chemical Agent Resistant Coating
CCW	Counterclockwise
CM	Centimeter
COEI	Component Of End Item
CPC	Corrosion Prevention and Control
CTA	Common Table of Allowances
CW	Clockwise
EIR	Equipment Improvement Recommendation
EOD	Explosive Ordnance Disposal
°F	Degree Fahrenheit
FES	Fire Extinguisher System
FOV	Family of Vehicles
FPM	Feet Per Minute
HR	Hand Receipt
KG	Kilogram
KPA	Kilopascal
KMPH	Kilometer Per Hour
L	Liter
M	Meter
MAX	Maximum
MHZ	Megahertz
MIN	Minimum
MPH	Miles Per Hour
NBC	Nuclear, Biological, Chemical
PMCS	Preventive Maintenance Checks and Services

GENERAL INFORMATION - CONTINUED

0001 00**LIST OF ABBREVIATIONS - CONTINUED**

PRV	Pressure Relief Valve
PSI	Pounds Per Square Inch
RF	Radio Frequency
RFI	Radio Frequency Interference
RPM	Revolutions Per Minute
SE	Support Equipment
SOI	Signal Operating Instructions
SOP	Standard Operating Procedures
STE	Special Test Equipment
STE/ICE-R	Simplified Test Equipment for Internal Combustion Engines Reprogrammable
VIS	Vehicle Intercommunication System (AN/VIC-3(V))
WP	Work Package

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CHAPTER 1

DESCRIPTION AND THEORY OF OPERATION

EQUIPMENT CHARACTERISTICS, CAPABILITIES AND FEATURES.

0002 00**THIS WORK PACKAGE COVERS:**Characteristics, Capabilities and Features

CHARACTERISTICS

The M88A2 Heavy Recovery Vehicle is an armored, full-tracked, low silhouette vehicle. It is used for hoisting, winching, and towing operations for all vehicles up to 70 tons (63.49 metric tons). It is equipped to assist in repairing disabled vehicles under field conditions. The vehicle carries a crew of three: Commander, Operator, and Mechanic/Rigger. Refer to FM 9-43-2, Vehicle Recovery Operation for recovery methods using the vehicle equipment.

CAPABILITIES AND FEATURES

- Maximum speed 25 mph (48.3 kmph) (without towed load)
- Maximum range without towed load, in third gear lockup is 314 mi (505.2 km)
- 1050 hp, 12-cylinder, 4-cycle, air-cooled, diesel main engine
- Combined transmission, differential, steering, and braking unit
- Hydraulic power-assisted braking
- Main winch maximum pull (straight line) 140,000 lbs (63,560 kg)
- Hoist winch maximum lift (four part line) 70,000 lbs (31,780 kg)
- Auxiliary winch maximum pull (straight line) 6,000 lbs (2,724 kg)
- Hull and cab armor protect vehicle from 30 mm direct fire
- 10.8 hp, 2-cylinder, 4-cycle, air-cooled, diesel auxiliary power unit (ONAN engine)
- 17.5 hp, 2-cylinder, 4-cycle, air-cooled, diesel auxiliary power unit (HATZ engine)
- Gas-particulate filter unit
- M239 smoke grenade system
- Exhaust smoke generating system
- Deep water fording kit
- .50 caliber machine gun, M2
- Two 5.56 mm caliber rifles, M16

END OF TASK

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS.

0003 00

1	Auxiliary Winch	Used to deploy the main winch cable.
2	Night vision viewer protective cover	Protects the AN/VVS-2(V) night vision viewer hood when installed in the driver's hatch during operation.
3	Emergency flasher light	Flashing amber light for emergency situations.
4	Turn signal lamps	Used when driving to indicate intended turns.
5	Level winder	Used to spool the main winch cable properly onto the main winch drum.
6	Towing lugs	Used to tow the M88A2 if disabled.
7	Winch lug	Used to connect main winch cable back to M88A2 during two-part line recovery operations.
8	Spade	Used to prepare the recovery site and to stabilize the M88A2 when hoisting or winching heavy loads.
9	Headlights	Provide light for driving at night and under blackout conditions.
10	Horn assembly	Used as a warning device.
11	M239 smoke grenade launchers	Used to fire smoke grenades to provide concealment.
12	Vision blocks	Allows the crew to see outside the vehicle while operating with the hatches closed.
13	Front lifting eyes	Used to hoist the M88A2 for transport.
14	M17 periscopes	Allows the crew to see outside the vehicle while operating with the hatches closed.

