

TECHNICAL MANUAL

**OPERATOR'S, UNIT, DIRECT SUPPORT,
AND GENERAL SUPPORT MAINTENANCE MANUAL
FOR
HEAVY EQUIPMENT TRANSPORTER SEMITRAILER
70 TON, M1000
NSN 2330-01-303-8832 (EIC: CXU)**

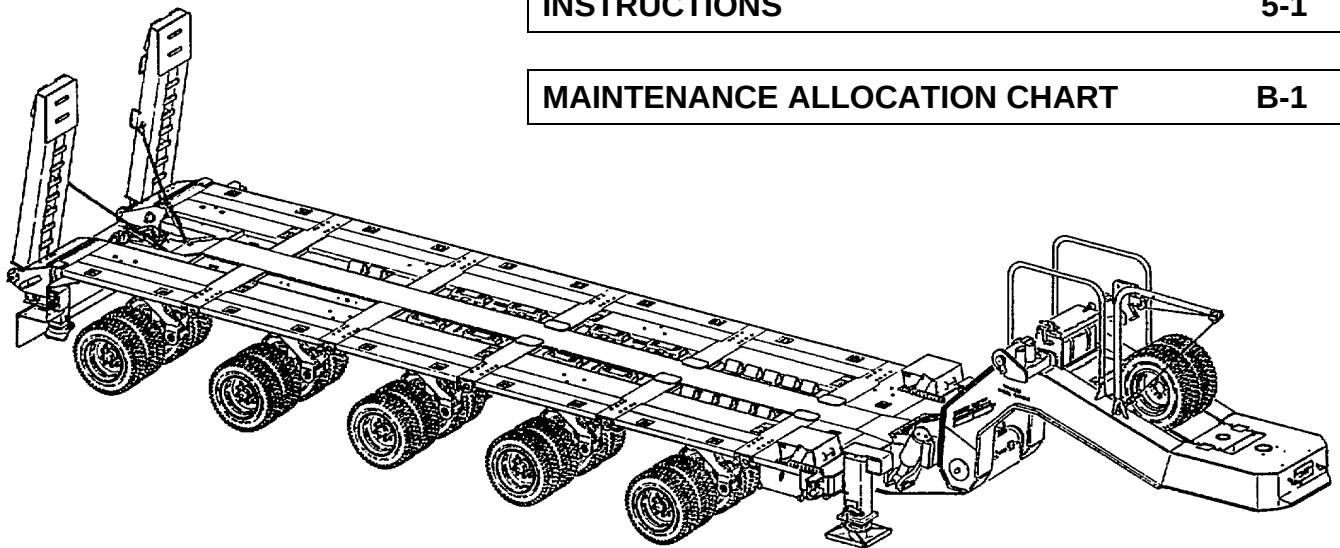
OPERATING INSTRUCTIONS	2-1
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OPERATOR/CREW MAINTENANCE INSTRUCTIONS	3-1
---	------------

UNIT MAINTENANCE INSTRUCTIONS	4-1
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DIRECT SUPPORT MAINTENANCE INSTRUCTIONS	5-1
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MAINTENANCE ALLOCATION CHART	B-1
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DEPARTMENT OF THE ARMY
AND U.S. MARINE CORPS
WASHINGTON, D.C., 30 November 1994

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FOR

HEAVY EQUIPMENT TRANSFER, SEMITRAILER
70 TON, M1000
NSN 2330-01-303-8832 (EIC: CXU)

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. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2, located in the back of this material, directly to: Commander, U.S. Army Tank-Automotive Command, ATTN: AMSTA-MM, Warren, MI 48397-5000. A reply will be furnished to you.

TABLE OF CONTENTS

	Page
CHAPTER 1 INTRODUCTION	1-1
Section I General Information	1-1
Section II Equipment Description and Data	1-2
CHAPTER 2 OPERATING INSTRUCTIONS	2-1
Section I Description and Use of Operator's Controls and Indicators	2-1
Section II Preventive Maintenance Checks and Services (PMCS).....	2-15
Section III Operation Under Usual Conditions	2-46
Section IV Operation Under Unusual Conditions	2-202
CHAPTER 3 OPERATOR/CREW MAINTENANCE INSTRUCTIONS	3-1
Section I Lubrication Instructions	3-1
Section II Operator/Crew Troubleshooting Procedure	3-16
Section III Operator/Crew Maintenance Instructions	3-33

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TABLE OF CONTENTS - CONT

		Page
CHAPTER 4	UNIT MAINTENANCE INSTRUCTIONS	4-1
Section I	Repair Parts, Special Tools, TMDE, and Support Equipment.....	4-1
Section II	Service Upon Receipt	4-2
Section III	Unit Preventive Maintenance Checks and Services (PMCS)	4-7
Section IV	Unit Troubleshooting	4-21
Section V	General Maintenance Procedures	4-56
Section VI	Unit Maintenance Instructions	4-91
Section VII	Preparation for Storage or Shipment	4-529
CHAPTER 5	DIRECT SUPPORT MAINTENANCE INSTRUCTIONS	5-1
Section I	Repair Parts, Special Tools, TMDE, and Support Equipment.....	5-1
Section II	Direct Support Troubleshooting.....	5-2
Section III	Direct Support Maintenance Procedures	5-7
APPENDIX A	REFERENCES.....	A-1
APPENDIX B	MAINTENANCE ALLOCATION CHART	B-1
APPENDIX C	BASIC ISSUE ITEMS LIST	C-1
APPENDIX D	ADDITIONAL AUTHORIZATION LIST (U.S.M.C. ONLY)	D-1
APPENDIX E	EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST	E-1
APPENDIX F	ILLUSTRATED LIST OF MANUFACTURED ITEMS	F-1
APPENDIX G	TORQUE LIMITS.....	G-1
	ALPHABETICAL INDEX	Index 1
	SCHEMATIC DIAGRAMS.....	FP-1

CHAPTER 1

INTRODUCTION

<u>SECTION NO.</u>	<u>TITLE</u>
I	General Information
II	Equipment Description and Data

Section I. GENERAL INFORMATION

<u>PARA. NO.</u>	<u>TITLE</u>
1-1	Scope
1-2	Maintenance Forms, Records, and Reports
1-3	Destruction of Army Materiel to Prevent Enemy Use
1-4	Preparation for Storage or Shipment
1-5	Reporting Equipment Improvement Recommendations (EIR)
1-6	List of Abbreviations
1-7	Metric Units

1-1. SCOPE

1-1.1. Type of Manual. Operator/crew unit, direct support, and general support maintenance manual including a maintenance allocation chart (MAC).

1-1.2. Model Number and Equipment Name. M1000 - Heavy Equipment Transporter Semitrailer.

1-1.3. Purpose of Equipment. To load or unload and transport a battle-dressed M-1 series Main Battle Tank (MBT), able or disabled, with or without tracks, during administrative and tactical operations.

1-2. MAINTENANCE FORMS, RECORDS, AND REPORTS

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

1-3. DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE

Refer to TM 750-244-6.

1-4. PREPARATION FOR STORAGE OR SHIPMENT

Refer to chapter 4, section VII.

1-5. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)

If your semitrailer 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 an SF 368 (Product Quality Deficiency Report). Mail it to Commander, U.S. Army Tank-Automotive Command, ATTN: AMSTA-MP, Warren, MI 43897-5000. We'll send you a reply.

1-6. LIST OF ABBREVIATIONS

HET	Heavy Equipment Transporter
ISO	International Standards Organization
MBT	Main Battle Tank

1-7. METRIC UNITS

Metric units, in addition to English units, are included in this manual. An English to metric conversion table is included on the inside back cover of this manual.

Section II. EQUIPMENT DESCRIPTION AND DATA

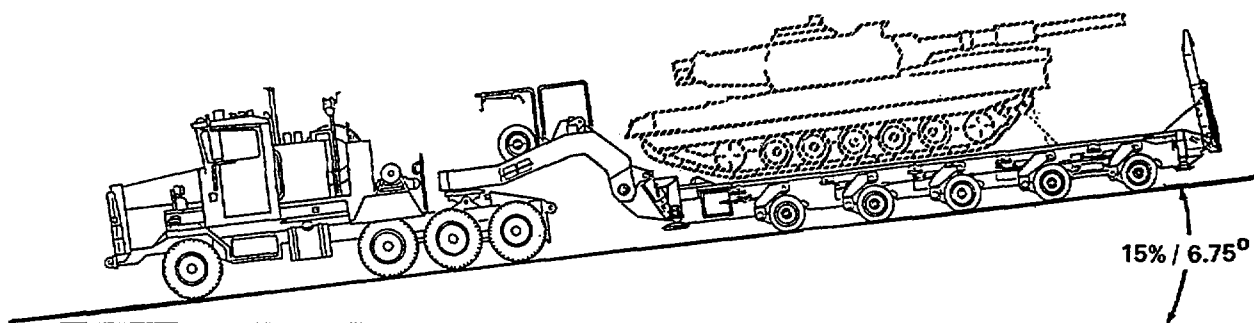
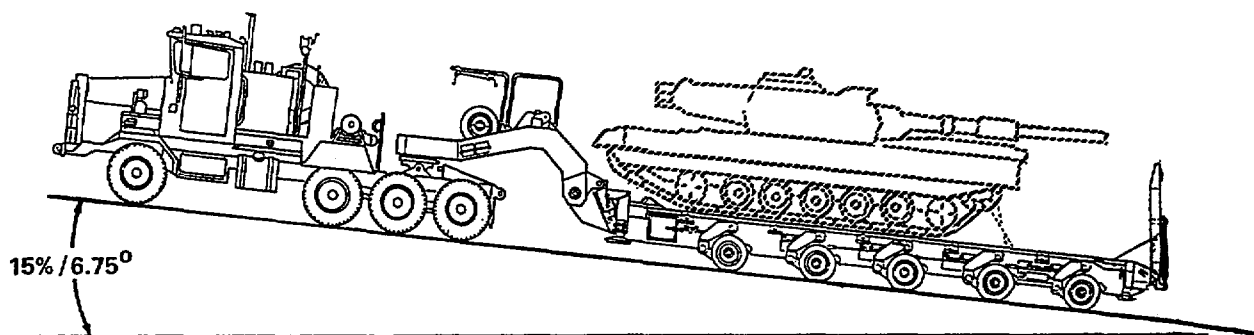
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1-8	Equipment Characteristics, Capabilities, and Features
1-9	Location and Description of Major Components
1-10	Differences Between Models
1-11	Equipment Data
1-12	Safety, Care, and Handling

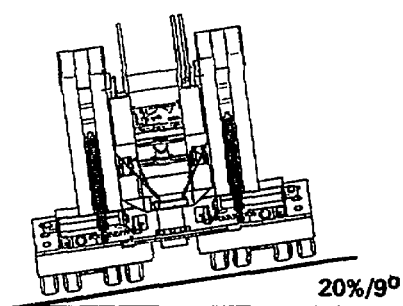
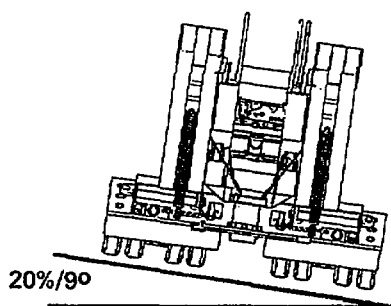
1-8. EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES

- a. This semitrailer is a flatbed trailer supported by five rows of axles; each row consists of two axle units (bogies) with inner and outer dual tires mounted to each bogie.
- b. The semitrailer prime movers are the U.S. Army M911 and M1070 tractors; however, the adjustable gooseneck enables the semitrailer to operate efficiently with the U.S. Marine Corps MK48/16, the HET M746, and the German FAUN SLT 50-2.

- c. The tractor/semitrailer combination can operate going up or down a 15 percent grade and has a maximum towing speed of 45 mph (72.4 km/h) on primary roads, 40 mph (64.3 km/h) on secondary roads, and 15 mph (24.1 km/h) off road.

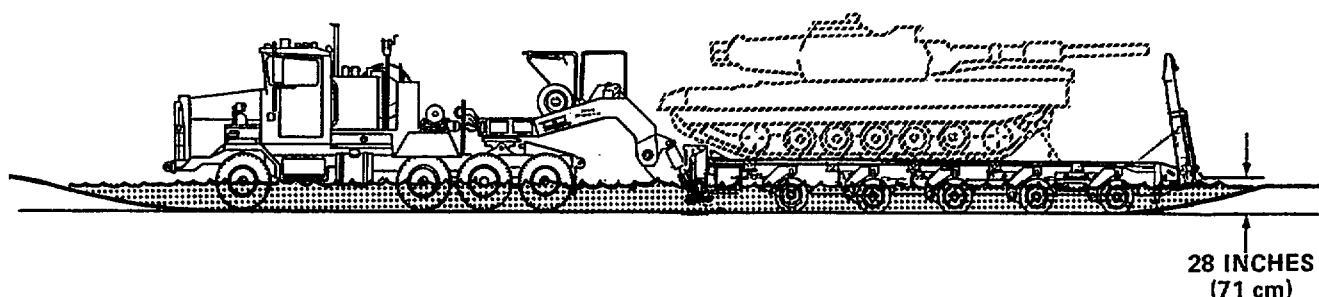


- d. Fully loaded, the tractor/semitrailer combination can operate on a 20 percent side slope with either side facing upslope without tires coming off the ground or overextending the suspension assemblies.



1-8. EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES (CONT)

- e. Fully loaded, the tractor/semitrailer can ford water to a maximum depth of 28 inches (71 cm), including wave height, without using additional water fording equipment.



- f. Towing vehicles (tractors) provide electrical power and air brake (pneumatic) pressure to the semitrailer through standard intervehicular connections for brake lights, turn signals, blackout lights, clearance lights, and service and emergency brakes.
- g. The semitrailer is automatically steered in response to turning of the tractor. When in tow, semitrailer can negotiate a 90-degree turn in one continuous motion, at an intersection from one 30-foot (9m) wide road to another 30-foot (9m) wide road.
- h. The auxiliary power unit (APU) provides power for the entire hydraulic system and is used for independent adjustments of the suspension, steering, and gooseneck.
- i. The bogies (suspension system, axles, brakes, and wheels) simultaneously move up and down and can be individually isolated, allowing access for tire changes or trailer movement with a disabled bogie.

NOTE

The terms used throughout this manual to describe areas and parts of the semitrailer, and their location relative to each other, are referenced as follows:

When a person stands at the loading ramp end (rear) of the semitrailer looking toward the gooseneck on the forward (front) end of the semitrailer, the side on the left is designated as the "streetside" and the side on the right is the "curbside". Locations of areas and items on or under the semitrailer platform will be identified as inboard (toward or nearest the center of the platform) or outboard (farthest from the center). For example, the hydraulic operating controls and gages are located on the curbside of the semitrailer under the front corner of the platform. The crowbar is mounted at the rear of the semitrailer under the loading ramps.

1-9. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS

GOOSENECK ASSEMBLY (1). The gooseneck assembly (1) is the forward most part of semitrailer and provides overall hookup to a tractor.

INTERVEHICULAR CONNECTIONS (2 and 3). Two electrical connectors (2) and gladhand connectors (3) provide electrical and air brake connections between the tractor and semitrailer.

GRAB HANDLE (4). A grab handle (4), located at the front streetside of the gooseneck, is used for access to back of tractor when making intervehicle connections and when working with tractor winch cables.

KINGPIN AND STEERING WEDGE (5 and 6). The kingpin (5) and steering wedge (6), located under the front of the gooseneck assembly, provide automatic steering for the semitrailer when connected to the tractor. The kingpin is the center pivoting point for the trailer, and the steering wedge turns with the trailer and operates two master steering cylinders.

STEERING CONSOLE (7). The steering console (7), located within the gooseneck assembly, consists of a steering arm, a pivoted steering console, and two master steering hydraulic cylinders. When the steering wedge turns, it operates the steering arm which rotates the steering console. Two master hydraulic cylinders are operated by the steering console and displace hydraulic fluid to two slave cylinders on the platform.

