

# ARMY TM 9-2330-213-14&P AIR FORCE TO 36A11-1-461

## TECHNICAL MANUAL

OPERATOR'S, UNIT, DIRECT SUPPORT,  
AND GENERAL SUPPORT MAINTENANCE MANUAL  
(INCLUDING REPAIR PARTS AND SPECIAL TOOLS LISTS)

FOR

TRAILER, CHASSIS: 1-1/2-TON, 2-WHEEL

M103A1 (NSN 2330-00-835-8629)  
M103A3 (NSN 2330-00-141-8052)

TRAILER, CARGO: 1-1/2-TON, 2-WHEEL

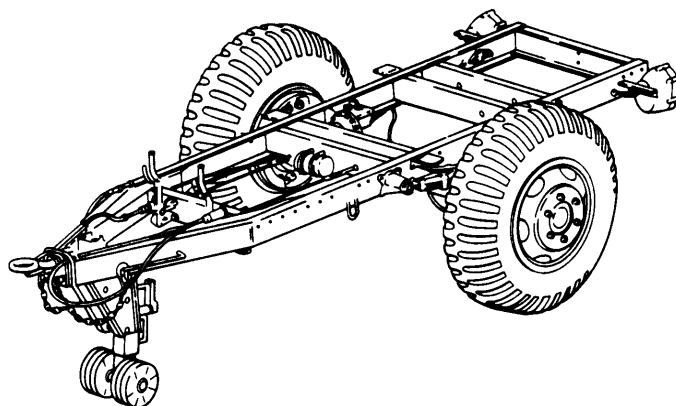
M105A1 (NSN 2330-00-835-8631)  
M105A2 (NSN 2330-00-141-8050)  
M105A2C (NSN 2330-00-542-5689)

TRAILER, TANK, WATER: 1-1/2-TON, 2-WHEEL, 400-GALLON

M107A1 (NSN 2330-00-835-8633)  
M107A2 (NSN 2330-00-141-8049)  
M107A2C (NSN 2330-00-542-5688)

TRAILER, VAN, SHOP: FOLDING SIDES, 1-1/2-TON, 2-WHEEL

M448 (NSN 2330-00-631-5692)



### M103 SERIES

This manual supersedes TM 9-2330-213-14&P/TO 36A11-1-461, dated 30 September 1985.

Approved for public release: distribution unlimited.

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TECHNICAL MANUAL  
TM 9-2330-213-14&P

HEADQUARTERS, DEPARTMENTS OF  
THE ARMY AND THE AIR FORCE  
Washington D.C., 9 October 1990

TECHNICAL ORDER  
TO 36A11-1-461

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M448 (NSN 2330-00-631-5692)

Current as of 30 March 1990

**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 manual, direct to: Commander, U.S. Army Tank-Automotive Command, ATTN: AMSTA-MB, Warren, MI 48397-5000. A reply will be furnished to you.

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# CHAPTER 1 INTRODUCTION

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### 1-1. SCOPE.

a. This manual describes the operation and unit, direct support, and general support maintenance, including repair parts and special tools lists for:

- Trailer, Cargo: 1 1/2-Ton, 2-Wheel, M105A1 with trailer chassis M103A1.
- Trailer, Cargo: 1 1/2-Ton, 2-Wheel, M105A2 with trailer chassis M103A3.
- Trailer, Cargo: 1 1/2-Ton, 2-Wheel, M105A2C (with vacuum/hydraulic brake system).
- Trailer, Tank, Water: 1 1/2-Ton, 2-Wheel, 400-Gallon, M107A1 (with single line air/hydraulic brake system).
- Trailer, Tank, Water: 1 1/2-Ton, 2-Wheel, 400-Gallon, M107A2 and M107A2C (with dual line air/hydraulic brake system).
- Trailer, Van, Shop: Folding sides, 1 1/2-Ton, 2-Wheel, M448 with trailer chassis M103A3.

b. Throughout the manual, the terms “right” and “left” are used to describe views of the trailers, as viewed from the rear.

### 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.

For destruction of Army materiel to prevent enemy use, refer to TM 750-244-6.

### 1-4. PREPARATION FOR STORAGE OR SHIPMENT.

For information on preparing the trailers for storage or shipment, refer to Chapter 4, Section XV.

### 1-5. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIRs).

if your trailer 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, U. S. Tank-Automotive Command, ATTN: AMSTA-MP, Warren, MI 48937-5000. We will send you a reply.

**Section II. EQUIPMENT DESCRIPTION AND DATA**

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**1-6. EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES.**

a. The M103A1 and M103A3 chassis are used with the following:

- (1) Cargo Trailer Series M105A1, M105A2, and M105A2C. Carry a maximum payload of 3000 lb (1362 kg) either cross-country or highway.
- (2) Water Tank Series M107A1, M107A2, and M107A2C. Transport water with a maximum payload of 3335 lb (1514 kg) either cross-country or highway.
- (3) Folding Side Shop Van Trailer M448. Equipped with a 110-volt electrical system and is used as a mobile battery or paint shop. The M448 has a maximum payload of 3000 lb (1362 kg) either cross-country or highway.

b. The trailers are designed to be towed by the M35 2 1/2-Ton Cargo Truck. Maximum allowable speed is 50 mi/h (80 km/h) highway and 30 mi/h (48 km/h) cross-country.

c. The trailers are equipped with:

- (1) A 24-volt electrical system capable of operating under standard and blackout modes,
- (2) An adjustable caster assembly to support front of trailer when uncoupled from the towing vehicle.
- (3) An automatic emergency braking in the event of trailer breakaway from the towing vehicle.
- (4) Manually operated parking brakes used to secure the trailer when stopped or parked.
- (5) Two-wheel single axle with leaf spring suspension to absorb road shock.

**NOTE**

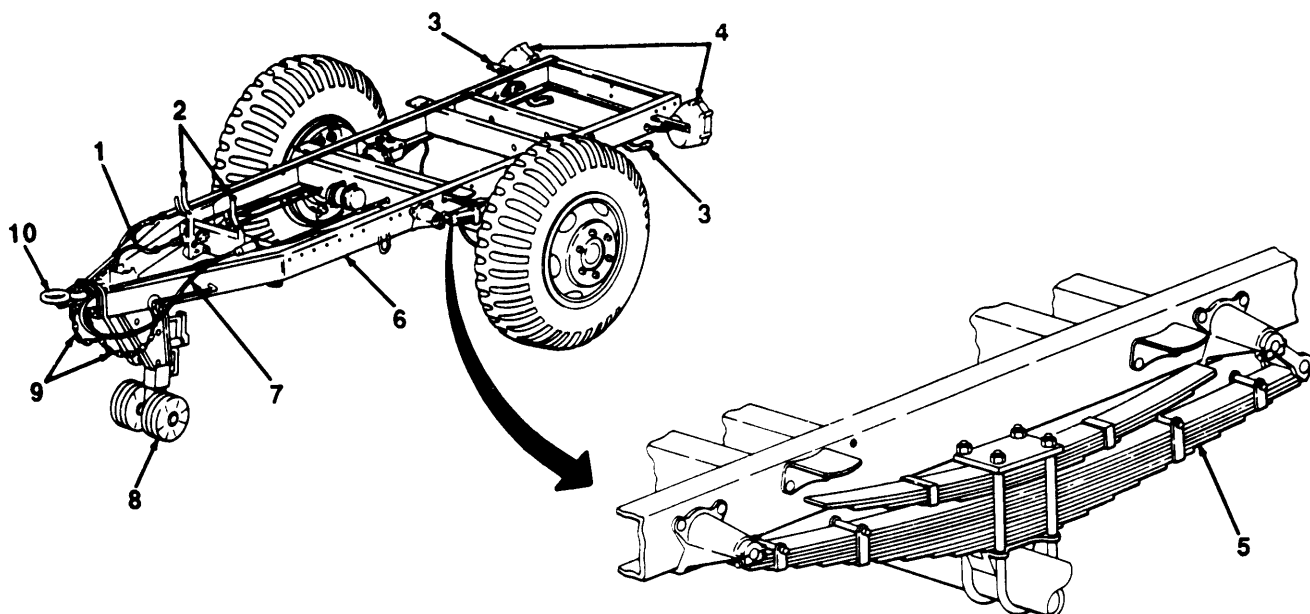
All models of the M103 Series Chassis built after 1977 have two air lines.

- (6) Single-line air/hydraulic (M103A1 and M107A1), dual-line air/hydraulic (M103A3, M107A2, and M107A2C), or vacuum/hydraulic brake system (M105A2C) which receives air or vacuum pressure from the towing vehicle.



### 1-7. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS

a. M103 Series Chassis Trailer.

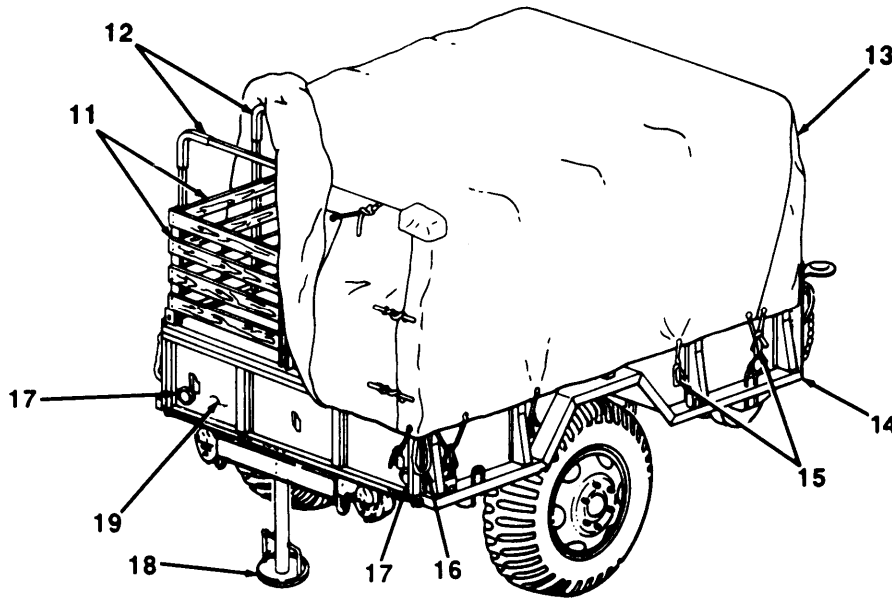


Key	Component	Description
1	Intervehicular Cable	Connects trailer electrical system to the towing vehicle.
2	Handbrake Levers (All Except M107A1)	Used to activate the handbrakes when the trailer is stopped or parked.
3	Handbrake Levers (M107A1)	Used to activate the handbrakes when the trailer is stopped or parked.
4	Light Assemblies	Consist of blackout, tall, and composite lights, indicate presence of trailer to vehicles traveling behind.
5	Leaf Spring	Component of suspension system which serves to cushion road shock.
6	Frame Assembly	Composed of two pressed-steel siderails reinforced by six pressed-steel crossmembers. Serves to support the trailer load.
7	Intervehicular Air Hose(s)	Connect(s) trailer service brake system to the towing vehicle.
8	Adjustable Caster Assembly	Supports front of trailer when not coupled to the towing vehicle.
9	Safety Chains	Hook to eyebolts on towing vehicle to prevent the trailer from fully breaking away.
10	Drawbar Ring	Used to couple trailer to towing vehicle pintle.

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1-7. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS (Con't).

b. M105 Series Cargo Trailer.



Key	Component	Description
11	Stake Racks	Verticality extend the cargo body to provide a larger cargo area.
12	Roof Bows	Provide support for paulin.
13	Paulin	Used to protect cargo from inclement weather.
14	Cargo Body	One-piece welded construction used to carry a maximum payload of 3000 lb (1362 kg). Left- and right-side body walls have stake pocket holes for mounting of stake racks.
15	Lashing Hooks	Attach paulin to the cargo body.
16	Tailgate Chains	Support the tailgate when open and lock the tailgate closed.
17	Reflectors	indicate trailer presence to vehicles traveling behind.
18	Rear Support Leg	Stabilizes rear of cargo body.
19	Tailgate	Provides access to trailer cargo.

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