

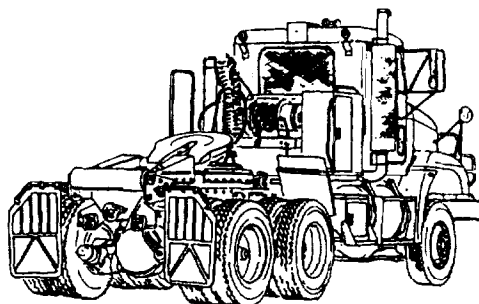
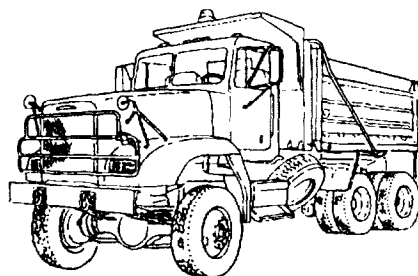
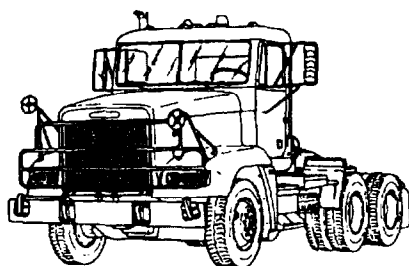
TM 9-2320-363-10

OPERATOR'S MANUAL
FOR
TRUCK, TRACTOR, LINE HAUL:
52,000 GVWR, 6 X 4, M915A2
(NSN 2320-01-272-5029)

TRUCK, TRACTOR, LIGHT EQUIPMENT TRANSPORTER (LET):
68,000 GVWR, 6 X 6, W/WINCH, M916A1
(NSN 2320-01-272-5028)

TRUCK, TRACTOR, LIGHT EQUIPMENT TRANSPORTER (LET):
68,000 GVWR, 6 X 6, W/WINCH, M916A2
(NSN 2320-01-431-1163)

TRUCK, DUMP, HEAVY, CHASSIS:
68,000 GVWR, 6 X 6, 14 CU YD, ON-OFF HIGHWAY
M917A1 (NSN 3805-01-431-1165)
M917A1 W/MCS (NSN 3805-01-432-8249)



Approved for public release; distribution is unlimited

HEADQUARTERS, DEPARTMENT OF THE ARMY
DECEMBER 1997

TECHNICAL MANUAL
TM 9-2320-363-10 *

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, D.C., 30 December 1997

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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 and Armaments Command, ATTN: AMSTA-AC-NML, Rock Island, Illinois 61299-7630. A reply will be furnished to you.

You may also provide DA Form 2028-2 information to TACOM via datafax or e-mail.

- TACOM's datafax number for AMSTA-AC-NML is: DSN 793-0726 or Commercial (309) 782-0726
- TACOM's e-mail address is: amsta-ac-nml@ria-emh2.army.mil

* This manual supersedes TM 9-2320-363-10, 5 Nov 1991 and all changes.

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HOW TO USE THIS MANUAL

This manual is designed to help you operate and maintain the M915 Family of Vehicles.

FEATURES OF THIS MANUAL:

- A table of contents is provided at the beginning of this manual. An index of all paragraphs contained within a section is found at the beginning of each section.
- WARNINGS, CAUTIONS, NOTES, subject headings, and other important information are highlighted in **BOLD** print as a visual aid.

WARNING

A WARNING indicates a hazard which can result in death or serious injury.

CAUTION

A CAUTION is a reminder of safety practices or directs attention to usage practices that may result in damage to equipment.

NOTE

A NOTE is a statement containing information that will make the procedure easier to perform.

- Statements and words of particular importance are printed in CAPITAL LETTERS to create emphasis.
- Instructions are located with illustrations that show the specific task on which the operator is working.
- Dashed leader lines used in illustrations indicate that called out items are not visible (i.e., they are located within the structure). Dashed leader lines in the Lubrication Chart indicate that lubrication is required on BOTH sides of the equipment.
- Technical instructions include metric units in addition to standard units. A metric conversion chart is provided on the inside back cover.
- An alphabetical index is provided at the end of the manual to assist in locating information not readily found in the table of contents.

FOLLOW THESE GUIDELINES WHEN YOU USE THIS MANUAL:

- Read through this manual and become familiar with its contents before attempting to operate or maintain the truck.
- A warning summary is provided at the beginning of this manual and should be read before attempting to operate or maintain the truck.

CHAPTER 1 INTRODUCTION

Section I. GENERAL INFORMATION

Paragraph Number	Paragraph Title	Page Number
1-1.	Scope	1-1
1-2.	Maintenance Forms and Procedures.	1-2
1-3.	Corrosion Prevention and Control (CPC)	1-2
1-4.	Destruction of Army Materiel to Prevent Enemy Use	1-2
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1-1. SCOPE.

a. **Type of Manual.**

(1) This manual is for use in operating and maintaining the M915 Family of Vehicles, to include the chassis of the M917A1 and M917A1 w/MCS (Material Control System) dump truck.

(2) For operation and maintenance of the M917A1 and M917A1 w/MCS dump truck body, refer to TM 5-3805-264-14&P.

b. **Equipment Name and Model Number.**

(1) Truck, Tractor, Line Haul: 52,000 GVWR, 6 X 4, M915A2

(2) Truck, Tractor, Light Equipment Transporter (LET): 68,000 GVWR, 6 X 6, w/Winch, M916A1 and M916A2

(3) Truck, Dump, Heavy, Chassis: 68,000 GVWR, 6 X 6, 14 Cu Yd, On-Off Highway, M917A1 and M917A1 w/MCS.

c. **Purpose of Equipment.**

(1) The M915A2 truck tractor is a 6 X 4 prime mover of semitrailers used primarily to transport containers, bulk cargo, and petroleum products over primary and secondary roads under worldwide climatic conditions in a military environment.

1-1. SCOPE (Con't).

(2) The M916A1 and M916A2 truck tractors are 6 X 6 prime movers of low-bed semitrailers used primarily to transport heavy engineer equipment over primary and secondary roads, and off-road, under worldwide climatic conditions in a military environment.

(3) The M917A1 and M917A1 w/MCS are 6 X 6 dump trucks used to transport, dump, or spread asphalt, aggregate, dirt, and similar materials over primary and secondary roads and off-road.

1-2. MAINTENANCE FORMS AND PROCEDURES.

Department of the Army forms and procedures used for the equipment will be those prescribed by DA Pam 738-750, *Functional User's Manual for the Army Maintenance Management System (TAMMS)*, as contained in the Maintenance Management Update.

1-3. CORROSION PREVENTION AND CONTROL (CPC).

a. Corrosion Prevention and Control (CPC) of Army materiel is a continuing concern. It is important that any corrosion problems with this item be reported so that the problem can be corrected and improvements can be made to prevent the problem in future items.

b. While corrosion is typically associated with rusting of metals, it can also include deterioration of other materials, such as rubber and plastic. Unusual cracking, softening, swelling, or breaking of these materials may be a corrosion problem. If a corrosion problem is identified, it can be reported using SF Form 368 (*Product Quality Deficiency Report*). Use of key words such as "corrosion," "rust," "deterioration," or "cracking" will ensure that the information is identified as a CPC problem. The form should be submitted to the address specified in DA Pam 738-750.

1-4. DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE.

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

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

If your truck 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 Form 368 (*Product Quality Deficiency Report*). Mail it to us at: Commander, U.S. Army Tank-automotive and Armaments Command, ATTN: AMSTA-AC-NML, Rock Island, Illinois 61299-7630. We'll send you a reply.

1-6. WARRANTY INFORMATION.

The vehicles are warranted by Freightliner Corporation in accordance with TB 9-2320-363-15. Warranty starts on the date found in block 23, DA Form 2408-9 in the logbook. Report all defects in material or workmanship to your supervisor, who will take appropriate action through your Unit Maintenance shop.

1-7. NOMENCLATURE CROSS-REFERENCE LIST.

Common Name	Official Nomenclature
Cable	Wire Rope
Cold Start System.	Ether Quick-Start System
Differential Lock/Unlock	Interaxle Lockout (M915A2), All-Wheel Drive (All Except M915A2)
Engine Coolant	Antifreeze, Ethylene Glycol Mixture
Gladhand.	Quick Disconnect Coupling
Jake Brake	Engine Brake
Komfort Loc®	Seat Belt Adjustment
No Spin@.	Automatic Locking Positive Traction Differential

1-8. LIST OF ABBREVIATIONS.

NOTE

Refer to ML-STD-12D for standard abbreviations.

Abbreviation	Definition
AAL	Additional Authorization List
ABS	Anti-Lock Brake System
BII	Basic Issue Items
CCentigrade or Celsius

1-8. LIST OF ABBREVIATIONS (Con't).

Abbreviation	Definition
CID	Cubic Inch Displacement
cm	Centimeter
COEI	Components of End Item
CTIS	Central Tire Inflation System
ECU	Electronic Control Unit
F	Fahrenheit
GCWR	Gross Combination Weight Rating
GVWR	Gross Vehicle Weight Rating
kg	Kilogram
kph	Kilometers per Hour
lph	Liters per Hour
MCS	Material Control System
PMCS	Preventive Maintenance Checks and Services
PTO	Power Take-Off

Section II. EQUIPMENT DESCRIPTION AND DATA

Paragraph Number	Paragraph Title	Page Number
1-9.	Equipment Characteristics, Capabilities, and Features	1-5
1-10.	Location and Description of Major Components.	1-6
1-11.	Differences Between Models	1-15
1-12.	Equipment Data	1-16

1-9. EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES.

a. **Characteristics.**

(1) The M915A2 is used to transport M871, M872, and M1062 semitrailers on line haul missions. It has a Gross Vehicle Weight Rating (GVWR) of 52,000 lb (23,608 kg) and is equipped with a two-way oscillating, sliding fifth wheel compatible with a two-inch kingpin. Maximum towed load on kingpin is 30,000 lb (13,620 kg).

(2) The M916A1 and M916A2 are used to transport M172 and M870 semitrailers loaded with heavy engineer equipment and 60PRS and WD6S 6,000 gallon water distributors over primary and secondary roads and off-road. They have a GVWR of 68,000 lb (30,872 kg) and are equipped with a 45,000 lb (20,430 kg) winch, a tail roller, and a four-way oscillating, sliding fifth wheel compatible with a 3 1/2-inch kingpin. Maximum towed load on kingpin is 40,000 lb (18,160 kg).

(3) The M917A1 and M917A1 w/MCS have a GVWR of 68,000 lb (30,872 kg), a 14 cu yd (10.7 m³) dump body capacity, and an 18.5 ton (16.8 metric ton) load capability. They are equipped with a Central Tire Inflation System (CTIS) which allows operation across a wide variety of terrain.

b. **Capabilities and Features.**

(1) While operating on Class I roads, the fully loaded M915A2 can maintain a speed of 55 mph (88 kph) on level roads and 29 mph (47 kph) while ascending a 3 percent grade. It has a minimum turning diameter, curb-to-curb, of 53 ft 9 in. (16.4 m).

(2) While operating on Class I roads, all other trucks can maintain a speed of 55 mph (88 kph) on level roads and 25 mph (40 kph) while ascending a 3 percent grade.

(3) Average cruising ranges at Gross Combination Weight Rating (GCWR) with a full tank of fuel will vary based on conditions (e.g., varying loads, prolonged idle, PTO usage, off-road driving, and climatic conditions). Cruising range is optimally 300 miles (483 km).

1-9. EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES (Con't).

(4) The M916A1 and M916A2 have a transmission-mounted PTO which powers the winch. The PTO on the M917A1 and M917A1 w/MCS powers the dump body controls (TM 5-3805-264-14&P).

(5) The M915A2 and M916A1 are equipped with an instrument panel mounted tachograph which registers and records data related to truck ground speed, engine speed, and distance traveled. This data is stored on a 7-day graph for a permanent record. All other models are equipped with a Datalogger which is a data processing module that provides data storage capability and records in detail the performance and utilization of the vehicle. Datalogger memory can store over a month of data for use by maintenance and management personnel. There is no operator interference with the Datalogger.

(6) The following capabilities and features are common to all models:

(a) air-activated front and rear non-asbestos cam brakes with a four-channel anti-lock brake system (ABS) to provide significantly improved handling and braking during emergency stops;

(b) operation in temperatures from -25°F (-32°C) to +125°F (+52°C), and to -40°F (-40°C) with arctic kit installed;

(c) start and climb capability of a 20 percent grade at GCWR in both forward and reverse directions;

(d) fording capability up to 20 in. (51 cm) deep for 5 minutes without damage or requiring maintenance before operations can continue;

(e) two-passenger aluminum corrosion-proof cab with a 90 degree tilt-forward hood for service accessibility;

(f) six cylinder, 12.7 liter, 400 horsepower, in-line diesel engine built by Detroit Diesel;

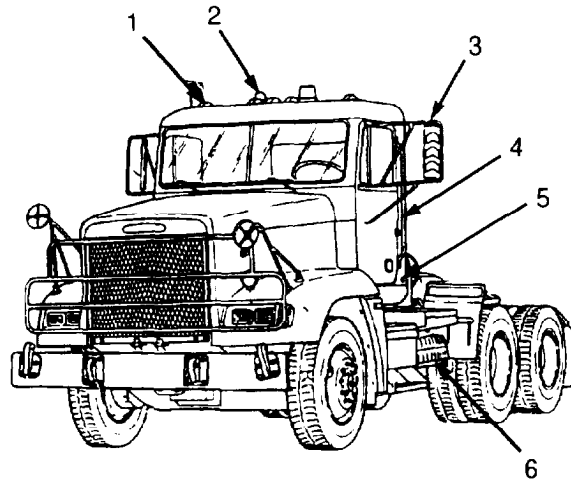
(g) Allison HT-740 four-speed automatic transmission.

1-10. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS.

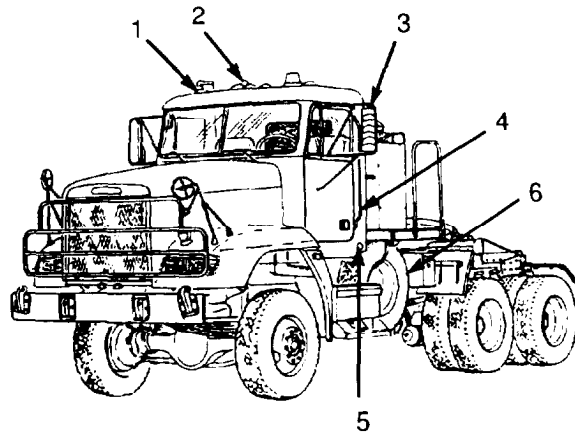
a. **M915A2, M916A1, and M916A2.**

Key	Component	Description
1	Marker Clearance Lights	Indicate outline of truck.
2	Air Horn	Provides an audible alert.

1-10. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS (Con't).



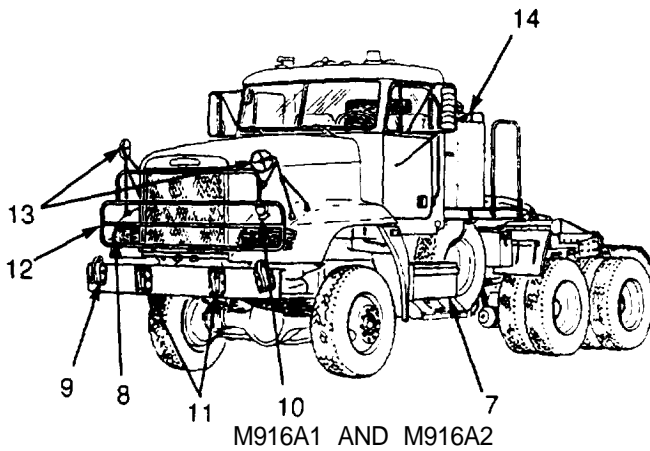
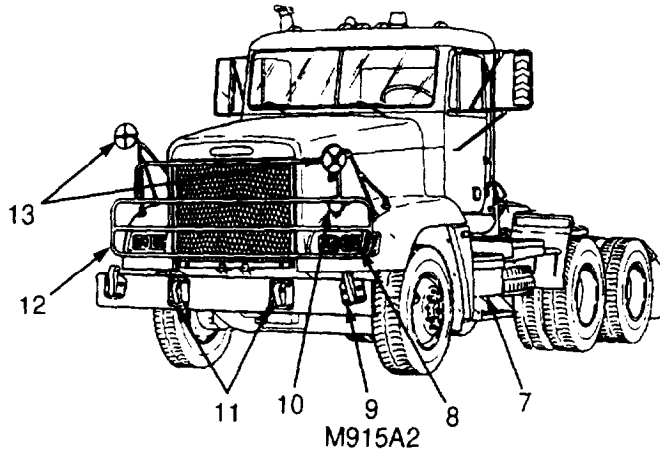
M915A2



M916A1 AND M916A2

Key	Component	Description
3	Side Mirrors	Provide driver with a view of sides of truck.
4	Grabhandles	Provide a hand hold for personnel climbing on truck.
5	Utility Power Receptacle	Supplies power for work lights. Located on both sides of truck.
6	Spare Wheel and Tire	Extra wheel and tire used in case of a flat tire.

1-10. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS (Con't).

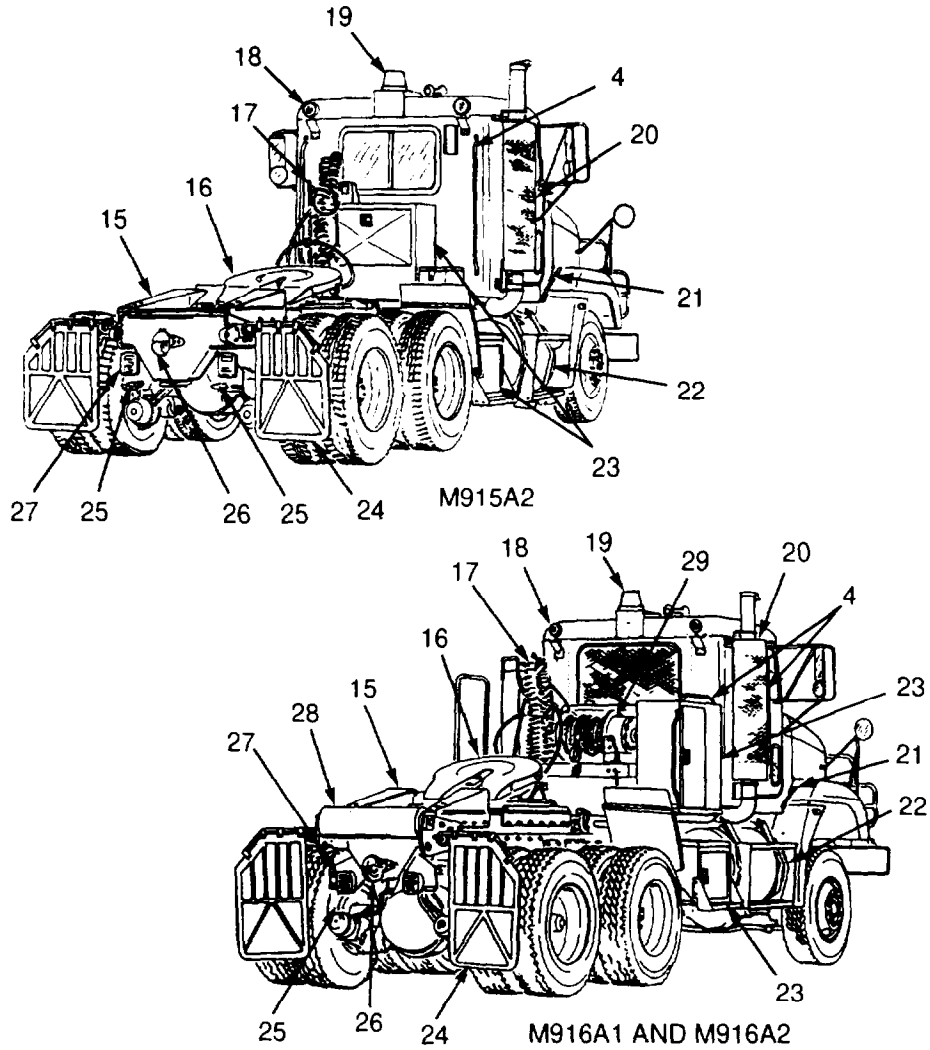


Key	Component	Description
7	Battery Box and Steps	Holds vehicle batteries and provides steps to access cab.
8	Front Service Lights	Include headlights and turn signals.
9	Sling Points	Provide attachment point for slings.
10	Blackout Lights	Used during blackout conditions. Include marker and drive lights.

1-10. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS (Con't).

Key	Component	Description
11	Towing Eyes	Provide attachment points for towing device.
12	Brush Guard	Protects front of hood and components under hood from damage.
13	Spotting Mirrors	Provide added visibility to sides of truck and semitrailer if towing.
14	Winch Controls (M916A1 and M916A2)	Operate winch.

1-10. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS (Con't).



Key	Component	Description
4	Grabhandles	Provide a hand hold for personnel climbing on truck.
15	Ramp	Sloped surface serves as an approach to fifth wheel and facilitates coupling of semitrailer.
16	Fifth Wheel	Coupling device for semitrailers with kingpins.

1-10. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS (Con't).

Key	Component	Description
17	Hosetenna	Mounting and stowage location for intervehicular air lines.
18	Utility Lights	Illuminate area in back of cab. There is one light on each side of cab.
19	Beacon Warning Light	Amber rotating light alerts other vehicles of presence of truck.
20	Exhaust Muffler	Deadens noise of engine exhaust.
21	Hood Latch	Locks hood closed. Located on both sides of hood.
22	Fuel Tank	Holds fuel. Steps mounted to tank provide access to cab.
23	Storage Boxes	Provide stowage area for BII and other items.
24	Mud Flaps	Prevent water and debris from spraying up on passers by or towed semitrailer.
25	Trailer Gladhands	Provide air supply for brakes of trailer.
26	Pintle Hook	Coupling device for trailers with lunettes.
27	Taillights	Contain composite tail, stop, backup, and turn signal lights.
28	Tail Roller (M916A1 and M916A2)	Facilitates coupling and uncoupling operations.
29	Hydraulic Winch (M916A1 and M916A2)	Powered by PTO to perform winching operations.