

TECHNICAL MANUAL

**UNIT MAINTENANCE 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)**

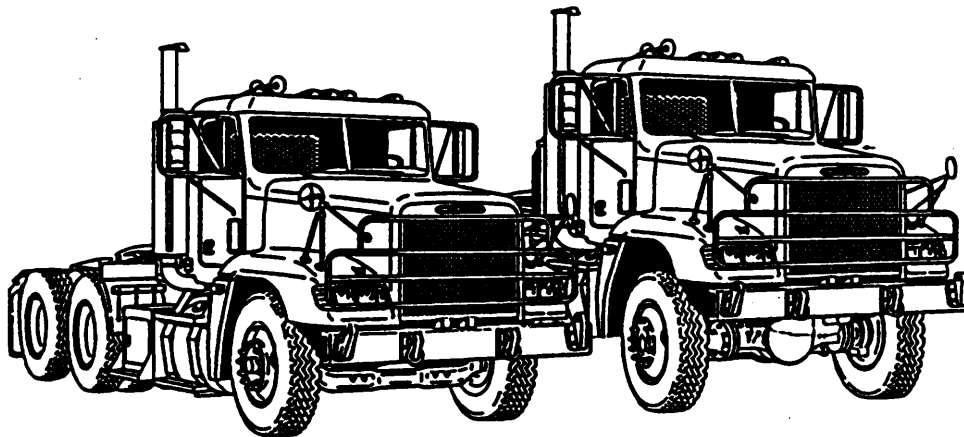


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Approval for public release distribution is unlimited

HEADQUARTERS, DEPARTMENT OF THE ARMY JUNE 1992

UNIT MAINTENANCE 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)****VOLUME 1 OF 2****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 at the back of this manual direct to: Commander, US Army Tank-automotive and Armaments Command, ATTN: AMSTA-AC-NML, Rock Island, IL 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 and the e-mail address is: amsta-ac-nml@ria-emh2.army.mil.

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HOW TO USE THIS MANUAL

This manual has an edge index that will help you find specific information in a hurry. Simply spread the pages in the right edge of the manual until the printed blocks can be seen. Open the manual where the block on the edge of the page lines up with your selected topic printed in the front cover block.

OVERVIEW

This manual is organized by chapters, sections and appendices. A summary of the organization of this manual, by major divisions, follows:

Front cover index gives you a quick reference to chapters, sections, and appendices that you will use often.

WARNINGS - All warnings you should observe while working on or around the M915 family of vehicles are shown in this part of the manual. These are repeated in the parts of the manual where they apply.

Table of Contents - The contents of the chapters and appendices are listed here.

Chapter 1 - This chapter contains general information about the M915 family of vehicles.

Chapter 2 This chapter describes services and inspections that must be performed at the unit level, such as services you must perform upon receipt of the vehicle, and preventive maintenance checks and services. Other sections contain painting and restenciling of markings, and general repair and cleaning methods.

Chapter 3 This chapter outlines troubleshooting of the M915 family of vehicles and their systems. It includes a troubleshooting index, by symptom and system, for troubleshooting.

Chapter 4 This chapter contains step-by-step instructions for doing the maintenance tasks. Each system of the M915 family of vehicles has its own section within the chapter, and any special tools, equipment, or supplies you may need for a task are listed.

Appendix A This appendix lists the technical manuals and other publications you may have to refer to while working on the vehicle.

Appendix B This appendix contains the Maintenance Allocation Chart (MAC) for the M915 family of vehicles.

Appendix C -This appendix lists the expendable supplies and materials you will need while performing maintenance on the M915 family of vehicles.

Appendix D This appendix describes any manufactured items you will need for performing maintenance on the M915 family of vehicles.

Appendix E - This appendix describes the proper method of tightening fasteners.

Index - The index is an alphabetical listing of the contents of this manual.

Back Cover - This inside back cover contains a metric conversion table.

USING THE MANUAL ON THE JOB

Find the task or component that needs repair by using the Index (page Index-1), then turn to the page listed for that task or component.

Read the INITIAL SETUP procedures, and gather the necessary items and personnel. Pay attention to the warnings. The INITIAL SETUP sheet is described on page v.

CHAPTER 1 INTRODUCTION

Section I. GENERAL INFORMATION

SCOPE

Type of Manual: Unit Maintenance Manual.

Model Numbers and Equipment Names

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: 6 x 6, M917A1 and M917A1 w/MCS.

Purpose of Equipment: The M915A2 truck tractor is a 6 x 4 prime mover of the M871, M872, and M1062 semitrailers used primarily to transport containers, bulk cargo, and petroleum products over primary and secondary roads under worldwide climatic conditions in a military environment.

The M916A1 and M916A2 truck tractors are 6 x 6 prime movers of low-bed M172 and M870 semitrailers, used primarily to transport heavy engineering equipment over primary and secondary roads, and off-roads, under worldwide climatic conditions in a military environment.

The M917A1 and M917A1 w/MCS dump truck is a 6 x 6 vehicle used to transport, dump or spread aggregate, hot mix asphalt and similar materials over primary and secondary roads and offroad.

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).

DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE

When the tactical situation requires that Army materiel be abandoned, refer to TM 750-244-6, Procedures for Destruction of Tank-Automotive Equipment to Prevent Enemy Use, for procedures on destruction of the vehicle.

PREPARATION FOR STORAGE OR SHIPMENT

Instructions for storage and shipment, including administrative storage, are found in TM 740-901 and MIL-V-62038D.

REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIRs)

If your vehicle needs improvement, let us know. Send us a Quality Deficiency Report. 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 (QDR) and mail it to:

COMMANDER
U.S. Army Tank-automotive and Armaments Command
ATTN: AMSTA-AC-NML
Rock Island, IL 61299-7630

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 direct and general support maintenance shop.

METRIC SYSTEM

The equipment described herein contains metric components and requires metric common and special tools; therefore, metric units in addition to English units will be used throughout the manual. An English-to-metric conversion table is included as the last page of this manual inside the back cover.

Section II. EQUIPMENT DESCRIPTION AND DATA

OVERVIEW

This section contains information that may be useful when performing unit maintenance tasks on the M915 family of vehicles. For additional information, refer to TM 9-2320-363-10.

EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES

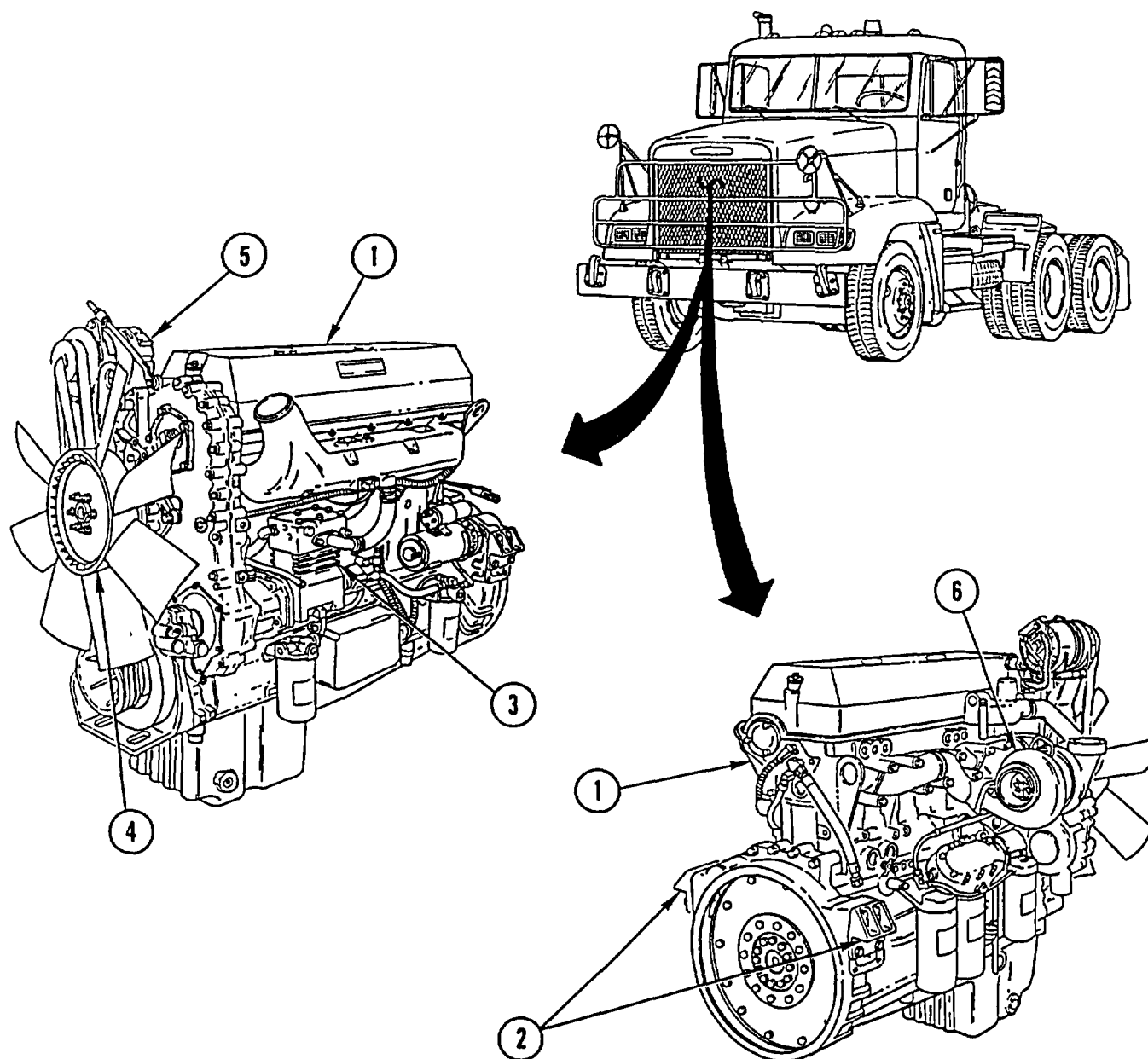
Characteristics:

- The M915A2 is used to transport M871, M872, and M1062 semitrailers on line haul missions.
- The M916A1 and M916A2 are used to transport M172 and M870 semitrailers carrying engineering/construction equipment.
- The M917A1 and M917A1 w/MCS dump truck is used to transport, dump or spread aggregate, hot mix asphalt and similar materials over primary and secondary roads and off road.

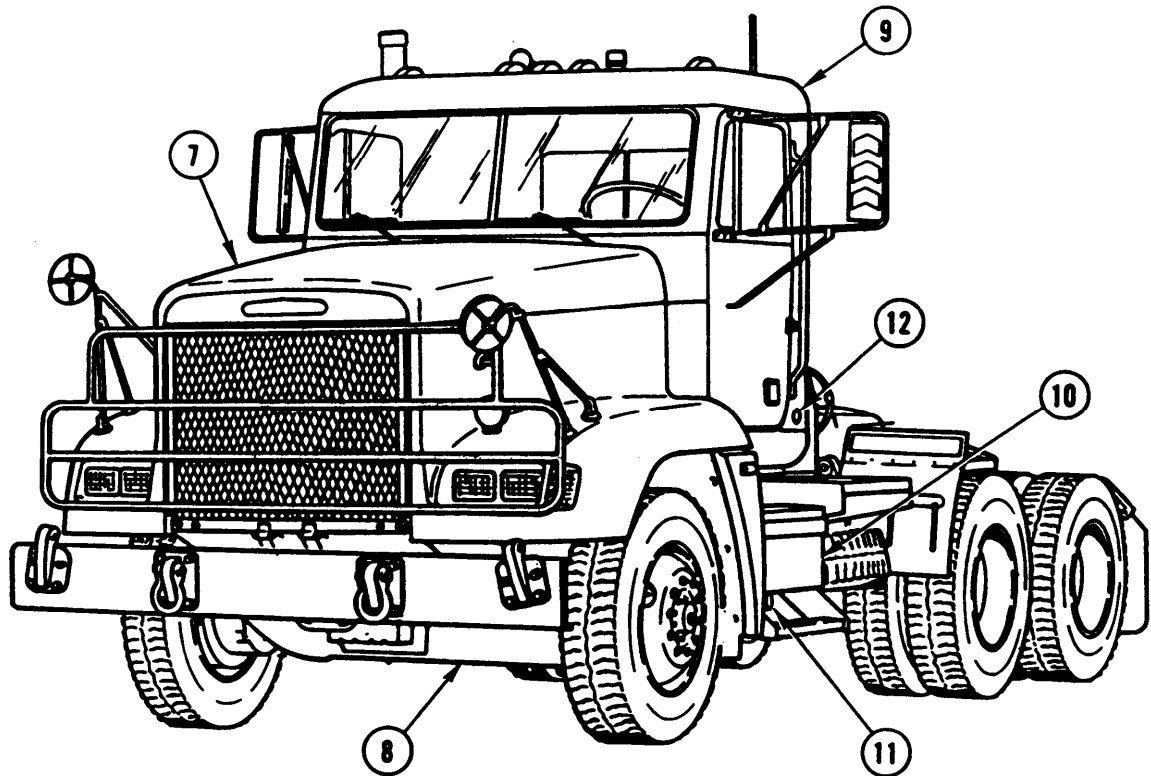
Capabilities and Features:

- All models feature a 4-channel Anti-Lock Brake System (ABS). The ABS is an electronically controlled braking system that provides the operator significantly improved handling and controllability. The ABS aids in preventing skids during emergency stops and also provides even braking where snow, ice, and heavy water are present.
- While operating on Class I roads, a fully loaded M915A2 tractor can maintain a speed of 55 mph (88.5 kph) on level roads and 29 mph (40.22 kph) while ascending a 3 percent grade.
- While operating on Class I roads, all other vehicles can maintain a speed of 54 mph (85.3 kph) on level roads and 25 mph (40.22 kph) while ascending a 3 percent grade.
- All models can start and climb a 20 percent grade at Gross Combination Weight Rating (GCWR) in both forward and reverse directions. All models are capable of operating on side slopes up to 10 percent where adequate traction is available.
- All models can ford water up to 20 in (51 cm) deep for 5 minutes without damage or requiring maintenance before operations can continue.
- All models are capable of operation in temperatures from -25°F to +125°F (-32°C to +52°C), and to -40°F (-40°C) with Arctic kit installed.
- Average cruising ranges at GCWR with a full tank of fuel will vary based on many conditions. For on-highway use under full power at 2100 rpm with 400 hp, the fuel rate will be 20.5-21.4 gph (77.6-81.0 lph). Varying loads; prolonged idle, such as using the Power Take-Off (PTO); off-road driving; and climatic conditions will affect the rate of fuel consumption.
- The minimum turning diameter, curb-to-curb, is 53 ft 9 in. (16.44 m) for the M915A2, 80.0 ft (24.38 m) for the M916A1 and M916A2, and 38.9 ft (11.9 m) for the M917A1 and M917A1 w/MCS.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS

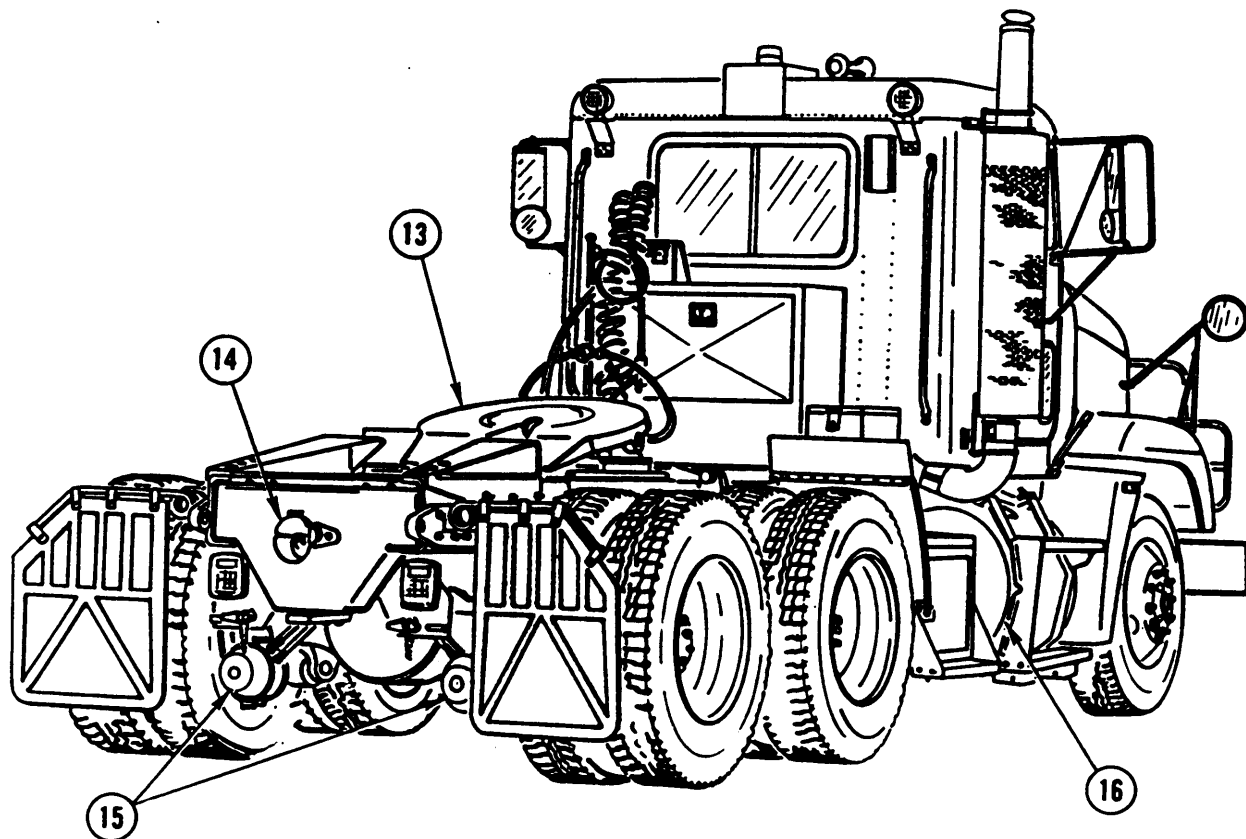


1. Engine. Provides power to operate the vehicle and all vehicle subsystems.
2. Rear Motor Mounts. Support engine and transmission assembly.
3. Air Compressor. Supplies compressed air to the brakes and all air operated systems.
4. Fan Clutch. Temperature controlled, air engaged.
5. Alternator. Supplies electrical power for battery charging and electrical system operation.
6. Turbocharger. Produces compressed air for engine.

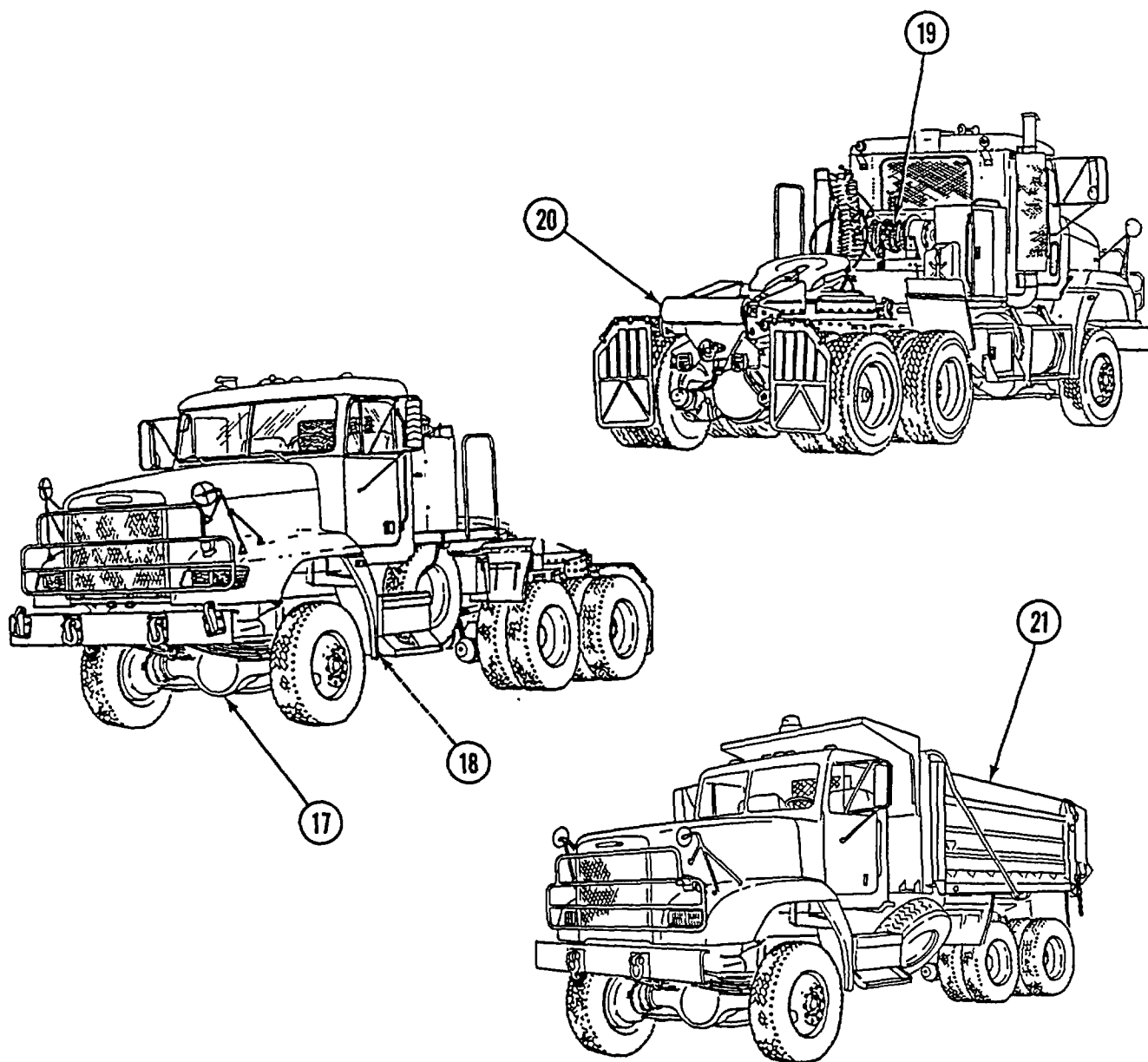


7. Engine Hood. Can be tilted forward for easy access to engine.
8. Front Axle. Non-drive, steering axle supports front of truck on two leaf springs, to minimize road shock.
9. Cab. Provides protection from weather for crew, and contains vehicle controls, gages, and indicators.
10. Battery Box. Contains four 12-volt batteries; also serves as a step.
11. NATO Slave Receptacle. Used when slave starting vehicle.
12. Work Lamp Receptacle. For use with the portable work lamps, provided with the B11.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS (CONT)



- 13. Sliding Fifth Wheel. Slides to accommodate different semitrailers and to adjust the load over the rear wheels.
- 14. Pintle Hook. Used for towing smaller trailers.
- 15. Brake Chambers. Spring loaded to provide safety brakes in the event of air pressure loss.
- 16. Fuel Tank. Storage of fuel for operation of vehicle.



M916A1 and M916A2

- 17. Front Drive Axle. Provides 6x6 mode, for off-road operation.
- 18. Transfer Case. Allows high/low shifting and engages front drive axle.
- 19. Hydraulic Winch. Used for lifting semitrailer onto the truck, for coupling.
- 20. Tail Roller. Allows winch cable rollover, clear of frame components.

M917A1 and M917A1 w/MCS

- 21. Dump Body. Used for transporting and spreading bulk materials.