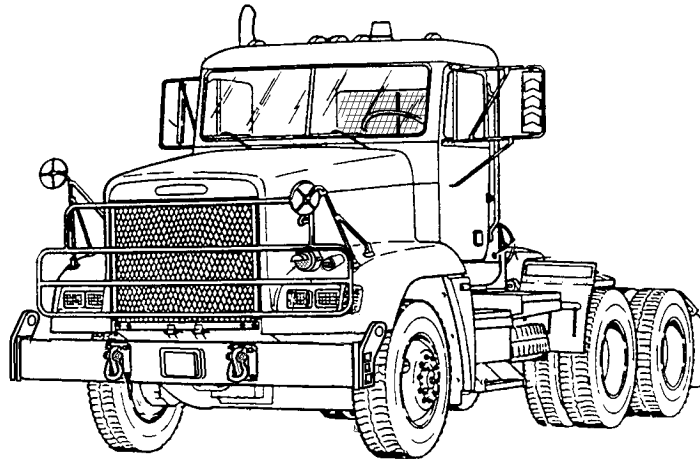


UNIT MAINTENANCE MANUAL

FOR

**TRUCK, TRACTOR, LINE HAUL:
52,000 GVWR, 6 X 4, M915A3
(NSN 2320-01-432-4847)**



Approved for public release; distribution is unlimited.

HEADQUARTERS, DEPARTMENT OF THE ARMY

May 2001

TECHNICAL MANUAL
TM 9-2320-302-20

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, D.C., 28 May 2001

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REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

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Table of Contents

	Page Number
Warning Summary	a
How to Use This Manual.	vii
CHAPTER 1 INTRODUCTORY INFORMATION WITH THEORY OF OPERATION	
WP 0001 00 General Information	0001 00-1
WP 0002 00 Equipment Description and Data	0002 00-1
WP 0003 00 Theory of Operation.	0003 00-1
CHAPTER 2 UNIT TROUBLESHOOTING PROCEDURES	
WP 0004 00 Troubleshooting Introduction.	0004 00-1
WP 0005 00 Troubleshooting Symptom Index	0005 00-1
WP 0006 00 Engine Troubleshooting	0006 00-1
WP 0007 00 DDEC Engine Troubleshooting	0007 00-1
WP 0008 00 Exhaust System Troubleshooting	0008 00-1
WP 0009 00 Cooling System Troubleshooting	0009 00-1
WP 0010 00 Electrical System Troubleshooting	0010 00-1
WP 0011 00 Transmission and Driveline Systems Troubleshooting	0011 00-1
WP 0012 00 Brake System Troubleshooting	0012 00-1
WP 0013 00 Anti-lock Brake System (ABS) Troubleshooting and Testing	0013 00-1

Table of Contents - Continued

	Page Number
WP 0014 00 Air System Troubleshooting	0014 00-1
WP 0015 00 Steering System Troubleshooting	0015 00-1
WP 0016 00 Chassis and Fifth Wheel Troubleshooting	0016 00-1
WP 0017 00 Air Conditioning System Troubleshooting and Testing	0017 00-1
WP 0018 00 Collision Warning System (CWS) Troubleshooting	0018 00-1
 CHAPTER 3 UNIT MAINTENANCE INSTRUCTIONS	
WP 0019 00 Service Upon Receipt	0019 00-1
WP 0020 00 Unit Preventive Maintenance Checks and Services (PMCS) Introduction	0020 00-1
WP 0021 00 Unit Preventive Maintenance Checks and Services (PMCS).	0021 00-1
WP 0022 00 Oil Fill Tube Maintenance	0022 00-1
WP 0023 00 Oil Level Dipstick, Tube, and Adapter Replacement	0023 00-1
WP 0024 00 Oil Filter Element Replacement.	0024 00-1
WP 0025 00 Oil Cooler and Oil Filter Adapter Maintenance.	0025 00-1
WP 0026 00 Oil Sample Valves Replacement	0026 00-1
WP 0027 00 Air Compressor Discharge Hose Replacement	0027 00-1
WP 0028 00 Air Compressor Governor Replacement and Adjustment	0028 00-1
WP 0029 00 Air Compressor Replacement	0029 00-1
WP 0030 00 Fuel Hoses and Fittings Replacement	0030 00-1
WP 0031 00 Fuel Strainer and Filter Element Replacement	0031 00-1
WP 0032 00 Fuel Filter Adapters Replacement	0032 00-1
WP 0033 00 Fuel Tank and Mounting Brackets Replacement.	0033 00-1
WP 0034 00 Fuel Pump Replacement.	0034 00-1
WP 0035 00 Automatic Ether Starting Aid Maintenance.	0035 00-1
WP 0036 00 Air Cleaner, Air Intake Duct, and Turbo Bypass Valve Maintenance.	0036 00-1
WP 0037 00 Air Intake Tubes and Hoses Replacement	0037 00-1
WP 0038 00 Charge Air Cooler and Air Recirculation Shield Replacement	0038 00-1
WP 0039 00 Exhaust System Muffler, Stack, and Heat Shield Replacement	0039 00-1
WP 0040 00 Exhaust System Flex Pipe, Clamps, and Heat Shield Replacement	0040 00-1
WP 0041 00 Drain and Fill Cooling System	0041 00-1
WP 0042 00 Coolant Hoses, Pipes, and Clamps Replacement.	0042 00-1
WP 0043 00 Thermostat and Thermostat Housing Cover Replacement	0043 00-1
WP 0044 00 Radiator Support Rod Replacement.	0044 00-1
WP 0045 00 Radiator Replacement	0045 00-1
WP 0046 00 Fan Belt Replacement and Adjustment	0046 00-1
WP 0047 00 Fan Impeller and Shroud Replacement	0047 00-1
WP 0048 00 Fan Clutch Solenoid Replacement	0048 00-1
WP 0049 00 Fan Clutch and Drive Pulley Replacement	0049 00-1
WP 0050 00 Water Filter Element Replacement	0050 00-1
WP 0051 00 Water Filter Adapter and Bracket Replacement	0051 00-1
WP 0052 00 Water Pump Maintenance	0052 00-1
WP 0053 00 Spindle and Housing Replacement	0053 00-1
WP 0054 00 Alternator Belt Replacement and Adjustment	0054 00-1
WP 0055 00 Alternator Replacement	0055 00-1
WP 0056 00 Starter Replacement.	0056 00-1
WP 0057 00 Voltage Regulator Replacement.	0057 00-1
WP 0058 00 Battery Equalizer Replacement	0058 00-1
WP 0059 00 Starter Relay Replacement.	0059 00-1

Table of Contents - Continued

	Page Number
WP 0060 00 Left Panel Gages and Lamps Replacement	0060 00-1
WP 0061 00 Center Gage Panel Maintenance	0061 00-1
WP 0062 00 Right Gage Panel and Lamps Replacement	0062 00-1
WP 0063 00 Upper Right Dash Panel Replacement	0063 00-1
WP 0064 00 Left Hand Switch Panel Maintenance	0064 00-1
WP 0065 00 Right Hand Switch Panel Replacement	0065 00-1
WP 0066 00 Control Module Replacement	0066 00-1
WP 0067 00 Heater and Air Conditioning Control Panel Replacement	0067 00-1
WP 0068 00 12V Power Receptacle Replacement	0068 00-1
WP 0069 00 Fiber Optic Light Source Replacement	0069 00-1
WP 0070 00 Check Engine Switch and Jumper Harness Replacement	0070 00-1
WP 0071 00 Fuse, Relay, Circuit Breaker, and Holder Replacement	0071 00-1
WP 0072 00 Master Battery Switch Replacement	0072 00-1
WP 0073 00 Turn Signal Switch Replacement	0073 00-1
WP 0074 00 Electronic Throttle Replacement	0074 00-1
WP 0075 00 Electronic Control Module Replacement	0075 00-1
WP 0076 00 NATO Slave Receptacle Replacement	0076 00-1
WP 0077 00 Utility Power Receptacle Replacement	0077 00-1
WP 0078 00 Trailer Electrical Receptacles Replacement	0078 00-1
WP 0079 00 Parking Brake Pressure Switch Replacement	0079 00-1
WP 0080 00 Water Level Module Replacement	0080 00-1
WP 0081 00 Water Level Probe Replacement	0081 00-1
WP 0082 00 Headlamp Adjustment	0082 00-1
WP 0083 00 Headlamp and Headlight Replacement	0083 00-1
WP 0084 00 Blackout Drive, Marker Light, and Wiring Harness Replacement	0084 00-1
WP 0085 00 Right Front Blackout Marker Replacement	0085 00-1
WP 0086 00 Rear Blackout Marker Replacement	0086 00-1
WP 0087 00 Taillight Maintenance	0087 00-1
WP 0088 00 Side Marker/Turn Signal Light Replacement	0088 00-1
WP 0089 00 Clearance Light Replacement	0089 00-1
WP 0090 00 Utility Light Maintenance	0090 00-1
WP 0091 00 Interior Light Unit and Bulb Replacement	0091 00-1
WP 0092 00 Fuel Pressure Sensor Replacement	0092 00-1
WP 0093 00 Fuel Temperature Sensor Replacement	0093 00-1
WP 0094 00 Fuel Level Sending Unit Replacement	0094 00-1
WP 0095 00 Oil Pressure Sensor Replacement	0095 00-1
WP 0096 00 Oil Temperature Sensor Replacement	0096 00-1
WP 0097 00 Oil Pressure Sending Unit Replacement	0097 00-1
WP 0098 00 Water Temperature Sensor Replacement	0098 00-1
WP 0099 00 Water Level Sensor Replacement	0099 00-1
WP 0100 00 Fan Temperature Sensor Replacement	0100 00-1
WP 0101 00 Air Temperature Sensor Replacement	0101 00-1
WP 0102 00 Turbo Boost Sensor (TBS) Replacement	0102 00-1
WP 0103 00 Timing Reference Sensor Replacement	0103 00-1
WP 0104 00 Synchronous Reference Sensor Replacement	0104 00-1
WP 0105 00 Air Pressure Sending Units (Primary/Secondary) Replacement	0105 00-1
WP 0106 00 Front Anti-lock Brake System (ABS) Sensor Replacement	0106 00-1

Table of Contents - Continued

	Page Number
WP 0107 00 Rear Anti-lock Brake System (ABS) Sensor Replacement	0107 00-1
WP 0108 00 Anti-lock Brake System (ABS) Electronic Control Unit Replacement	0108 00-1
WP 0109 00 Brake Light/Trailer Brake Light Sending Unit Replacement	0109 00-1
WP 0110 00 Collision Warning System (CWS) Antenna Alignment	0110 00-1
WP 0111 00 Collision Warning System (CWS) Maintenance	0111 00-1
WP 0112 00 Electric Horn Replacement	0112 00-1
WP 0113 00 Battery Replacement	0113 00-1
WP 0114 00 Battery Box Replacement.	0114 00-1
WP 0115 00 Battery Cables Replacement	0115 00-1
WP 0116 00 Stop/Tail/Backup Lights Wiring Harness Replacement	0116 00-1
WP 0117 00 Automatic Ether Starting Aid Wiring Harnesses Replacement.	0117 00-1
WP 0118 00 Cab-to-Frame Ground Wire Replacement	0118 00-1
WP 0119 00 Electrical Connectors Maintenance	0119 00-1
WP 0120 00 Shift Selector and Shift Tower Replacement.	0120 00-1
WP 0121 00 Transmission Oil Fill/Level Check Tube Replacement	0121 00-1
WP 0122 00 Transmission Oil Cooler Lines and Fittings Replacement.	0122 00-1
WP 0123 00 Transmission Oil Filter Elements Replacement.	0123 00-1
WP 0124 00 Transmission Electronic Control Unit (ECU) Replacement	0124 00-1
WP 0125 00 Transmission Electronic Control Unit (ECU) Wiring Harness Replacement . .	0125 00-1
WP 0126 00 Transmission Speed Sensor Replacement	0126 00-1
WP 0127 00 Transmission Oil Cooler Replacement	0127 00-1
WP 0128 00 Transmission Breather Replacement	0128 00-1
WP 0129 00 Driveline Replacement	0129 00-1
WP 0130 00 Driveline U-Joints and Bearings Replacement	0130 00-1
WP 0131 00 Front Axle Toe in Alignment	0131 00-1
WP 0132 00 Front Axle Stop Cushion Replacement	0132 00-1
WP 0133 00 Rear Axle Breather Replacement.	0133 00-1
WP 0134 00 Brake Pedal Replacement.	0134 00-1
WP 0135 00 Front Brakeshoe Replacement	0135 00-1
WP 0136 00 Front Brake Spider and Brake Chamber Bracket Replacement.	0136 00-1
WP 0137 00 Rear Brakeshoe Replacement.	0137 00-1
WP 0138 00 Rear Brake Spider and Brake Chamber Bracket Replacement	0138 00-1
WP 0139 00 Slack Adjuster Adjustment.	0139 00-1
WP 0140 00 Slack Adjuster and S-cam Replacement	0140 00-1
WP 0141 00 Front Air Brake Chamber Replacement.	0141 00-1
WP 0142 00 Rear Air Brake Chamber Replacement	0142 00-1
WP 0143 00 Primary I Air Tank and Fittings Replacement	0143 00-1
WP 0144 00 Primary II Air Tank and Fittings Replacement	0144 00-1
WP 0145 00 Secondary Air Tank and Fittings Replacement	0145 00-1
WP 0146 00 Air Supply Tank And Fittings Replacement	0146 00-1
WP 0147 00 Air Tube Replacement	0147 00-1
WP 0148 00 Constant Air Junction Block Replacement	0148 00-1
WP 0149 00 Cab Air Junction Block Replacement	0149 00-1
WP 0150 00 Tractor Protection Valves Replacement.	0150 00-1
WP 0151 00 Rear Relay Valve Replacement	0151 00-1
WP 0152 00 Front Service Brake Relay Valve Replacement.	0152 00-1
WP 0153 00 Front Gladhands Replacement	0153 00-1
WP 0154 00 Rear Gladhand Replacement	0154 00-1

Table of Contents - Continued

	Page Number
WP 0155 00 Front Quick-release Valve Replacement	0155 00-1
WP 0156 00 Rear Quick-release Valve Replacement.	0156 00-1
WP 0157 00 Air Dryer Replacement	0157 00-1
WP 0158 00 Air Dryer Canister Replacement	0158 00-1
WP 0159 00 Trailer Hand Brake Replacement.	0159 00-1
WP 0160 00 Parking Brake and Trailer Air Supply Valve Replacement	0160 00-1
WP 0161 00 Foot Brake Valve Replacement	0161 00-1
WP 0162 00 Front Anti-lock Brake System (ABS) Air Solenoid Replacement.	0162 00-1
WP 0163 00 Rear Anti-lock Brake System (ABS) Air Solenoid Replacement	0163 00-1
WP 0164 00 Front and Dual Rear Wheel Lug Nut Installation	0164 00-1
WP 0165 00 Front Hub, Drum, Wheel Bearings, and Seal Replacement.	0165 00-1
WP 0166 00 Rear Hub, Drum, Wheel Bearings, and Seal Replacement	0166 00-1
WP 0167 00 Steering Wheel Replacement.	0167 00-1
WP 0168 00 Universal Shaft Replacement and Repair.	0168 00-1
WP 0169 00 Pitman Arm and Drag Link Maintenance	0169 00-1
WP 0170 00 Power Steering Reservoir and Hose Maintenance	0170 00-1
WP 0171 00 Right Step Replacement.	0171 00-1
WP 0172 00 Left Step Replacement	0172 00-1
WP 0173 00 Left Side Platform Replacement	0173 00-1
WP 0174 00 Right Rear Step Replacement	0174 00-1
WP 0175 00 Front Bumper Replacement	0175 00-1
WP 0176 00 Spare Wheel Hoist Replacement	0176 00-1
WP 0177 00 Rear Tie Down Replacement	0177 00-1
WP 0178 00 Fifth Wheel Adjustment.	0178 00-1
WP 0179 00 Pintle Hook Replacement and Repair	0189 00-1
WP 0180 00 Towing Bracket Replacement	0180 00-1
WP 0181 00 Taillight Bracket Replacement.	0181 00-1
WP 0182 00 Front Shock Absorber Replacement	0182 00-1
WP 0183 00 Rear Shock Absorber Replacement	0183 00-1
WP 0184 00 Brush Guard Replacement	0184 00-1
WP 0185 00 Engine Hood Assembly Replacement	0185 00-1
WP 0186 00 Hood Assembly Repair	0186 00-1
WP 0187 00 Hood Adjustment	0187 00-1
WP 0188 00 Hood Latch Replacement	0188 00-1
WP 0189 00 Hood Liner Replacement	0189 00-1
WP 0190 00 Hood Prop and Mount Replacement	0190 00-1
WP 0191 00 Seat Replacement.	0191 00-1
WP 0192 00 Seat Repair	0192 00-1
WP 0193 00 Seat Belt Replacement	0193 00-1
WP 0194 00 Front Splash Guard and Fender Extension Maintenance	0194 00-1
WP 0195 00 Rear Fender Replacement	0195 00-1
WP 0196 00 Mud Flap Assembly Replacement	0196 00-1
WP 0197 00 Personal Gear Storage Box and Mounting Bracket Replacement	0197 00-1
WP 0198 00 Basic Issue Items (BII) Storage Box and Mounting Bracket Replacement	0198 00-1
WP 0199 00 Storage Box Latch Replacement	0199 00-1
WP 0200 00 Rear Platform Replacement	0200 00-1
WP 0201 00 Floor Mats Replacement	0201 00-1

Table of Contents - Continued

	Page Number
WP 0202 00 Cab Liners Replacement	0202 00-1
WP 0203 00 Head Liners Replacement	0203 00-1
WP 0204 00 Cab Overhead Storage Compartment Replacement	0204 00-1
WP 0205 00 Steering Column Cover Replacement	0205 00-1
WP 0206 00 Cab Door Adjustment.	0206 00-1
WP 0207 00 Transmission Tunnel Access Cover Replacement	0207 00-1
WP 0208 00 Rear View Mirror Replacement	0208 00-1
WP 0209 00 Spotter Mirror Replacement.	0209 00-1
WP 0210 00 Windshield Wiper Motor and Linkage Replacement	0210 00-1
WP 0211 00 Windshield Washer Reservoir Replacement	0211 00-1
WP 0212 00 Windshield Wiper and Wiper Arm Replacement	0212 00-1
WP 0213 00 Vehicle Jack Mounting Bracket Replacement	0213 00-1
WP 0214 00 Air Horn and Valve Replacement	0214 00-1
WP 0215 00 Data and Instruction Plates Replacement.	0215 00-1
WP 0216 00 M16 Rifle Mounting Bracket Replacement	0216 00-1
WP 0217 00 Cup Holder Replacement	0217 00-1
WP 0218 00 Cab Roof Air Deflector Replacement	0218 00-1
WP 0219 00 HVAC Air Cylinder Replacement	0219 00-1
WP 0220 00 HVAC Blower Motor Replacement.	0220 00-1
WP 0221 00 HVAC Heater Core Replacement	0221 00-1
WP 0222 00 Air Conditioner Resister Block Replacement	0222 00-1
WP 0223 00 Air Conditioner Thermostatic Switch Replacement	0223 00-1
WP 0224 00 Air Conditioner Binary Switch Replacement.	0224 00-1
WP 0225 00 Air Conditioner Leak Test	0225 00-1
WP 0226 00 Air Conditioner Compressor Magnetic Clutch Replacement	0226 00-1
WP 0227 00 M13 Decontamination Kit Mounting Bracket Replacement	0227 00-1
WP 0228 00 General Maintenance Instructions	0228 00-1
WP 0229 00 Arctic Heater Replacement (WEBASTO)	0229 00-1
WP 0230 00 Illustrated List of Manufactured Items	0230 00-1
WP 0231 00 Torque Limits	0231 00-1

CHAPTER 4 SUPPORTING INFORMATION

WP 0232 00 References	0232 00-1
WP 0233 00 Maintenance Allocation Chart (MAC) Introduction	0233 00-1
WP 0234 00 Maintenance Allocation Chart (MAC)	0234 00-1
WP 0235 00 Expendable and Durable Items List	0235 00-1
WP 0236 00 Tool Identification List	0236 00-1
Index	Index-1
DDEC III/IV Wiring Diagram.	FO-1
OEM Responsibility	FO-2

HOW TO USE THIS MANUAL

This manual is designed to help you maintain the M915A3 Tractor Truck.

FEATURES OF THIS MANUAL:

- A Table of Contents is provided at the beginning of this manual.
- 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 results 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 procedures 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 mechanic 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 THIS MANUAL:

- Read through this manual and become familiar with its contents before attempting to maintain the vehicle.
- A Warning Summary is provided at the beginning of this manual and should be read before attempting to maintain the vehicle.

CHAPTER 1
INTRODUCTORY INFORMATION WITH
THEORY OF OPERATION

GENERAL INFORMATION

0001 00**SCOPE**

1. **Type of Manual.** This manual is for use in performing Unit Maintenance on the M915A3 Tractor Truck.
2. **Equipment Name and Model Number.** Truck, Tractor, Line Haul: 52,000 GVWR, 6 X 4, M915A3.
3. **Purpose of Equipment.** The M915A3 Tractor Truck 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.

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, *Functional User's Manual for the Army Maintenance Management System (TAMMS)*, as contained in the Maintenance Management Update.

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-LC-CIP-WT, Rock Island, Illinois 61299-7630. We will send you a reply.

CORROSION PREVENTION AND CONTROL (CPC)

1. 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.
2. 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.
3. 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.

OZONE DEPLETING SUBSTANCES (ODS)

Listing to be provided by requiring activity.

DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE

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

PREPARATION FOR STORAGE OR SHIPMENT

For preparation for storage or shipment procedures, refer to TM 740-90-1 and MIL-V-62038D.

WARRANTY INFORMATION

The vehicle is warranted by Freightliner Corporation in accordance with TB 9-2320-302-15. 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.

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

Cold Start System	Ether Quick-start System
Engine Coolant	Antifreeze, Ethylene Glycol Mixture
Gladhand	Quick Disconnect Coupling
Jake Brake	Engine Brake
Komfort Loc®	Seat Belt Adjustment
TufTrac	Rear Suspension System

LIST OF ABBREVIATIONS**NOTE**

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

ABBREVIATION**DEFINITION**

ABS	Anti-lock Brake System
C	Centigrade or Celsius
CEL	Check Engine Light
CID	Cubic Inch Displacement
cm	Centimeter
CWS	Collision Warning System
DDEC	Detroit Diesel Electronic Controlled
DDL	Diagnostic Data Link
DDR	Diagnostic Data Reader
ECU	Electronic Control Unit
F	Fahrenheit
GCWR	Gross Combination Weight Rating
GVWR	Gross Vehicle Weight Rating
kg	Kilogram
km	Kilometer
kPa	Kilopascal
kph	Kilometers per Hour
kW	Kilowatt
l	Liter
lb	Pound
lb-ft	Pound foot
lph	Liters per Hour
m	Meter
mm	Millimeter
MTS	Movement Tracking System

GENERAL INFORMATION - CONTINUED

0001 00

LIST OF ABBREVIATIONS - CONTINUED

ABBREVIATION	DEFINITION
Nm.....	Newton Meter
PMCS	Preventive Maintenance Checks and Services
psi	Pounds per Square Inch
rpm	Revolutions per Minute

EQUIPMENT DESCRIPTION AND DATA

0002 00

EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES

1. Characteristics.

- a. The M915A3 Tractor Truck is used to transport M871, M872, and M1062 semitrailers on line haul missions.
- b. 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).

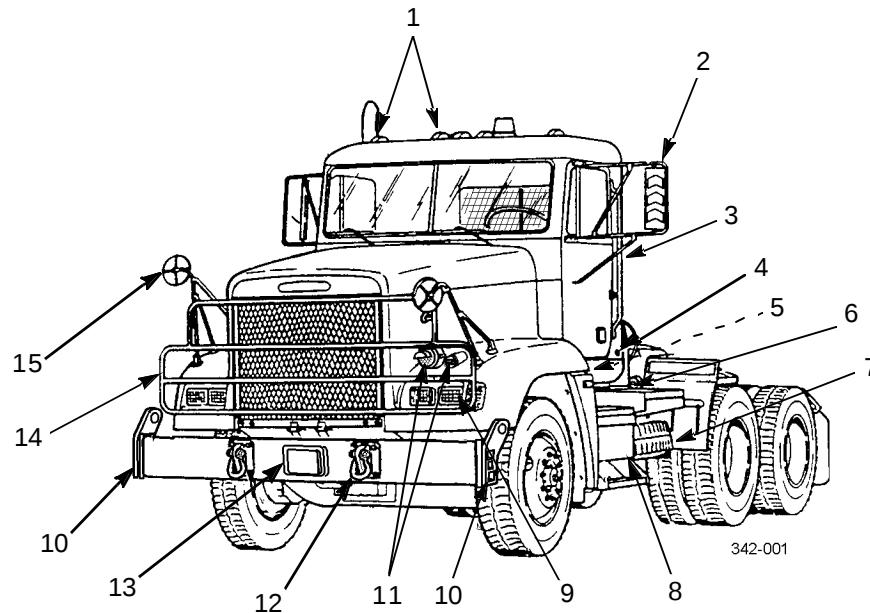
2. Capabilities and Features.

- a. While operating on Class I roads, the fully loaded M915A3 can maintain a speed of 65 mph (105 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).
- b. 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, and climatic conditions). Cruising range is optimally 400 miles (640 km).
- c. The M915A3 is equipped with an instrument panel mounted speedometer and tachometer which register truck ground speed and engine speed.
- d. The M915A3 has the following capabilities and features:
 - (1) 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
 - (2) operation in temperatures from -25°F (-32°C) to +125°F (+52°C), and to -40°F (-40°C) with arctic kit installed
 - (3) start and climb capability of a 20 percent grade at GCWR in both forward and reverse directions
 - (4) fording capability up to 20 in (51 cm) deep for 5 minutes without damage or requiring maintenance before operations can continue
 - (5) two-passenger aluminum corrosion-proof cab with a 90 degree tilt-forward hood for service accessibility
 - (6) six cylinder, 12.7 liter, 430 horsepower, in-line turbocharged diesel engine built by Detroit Diesel
 - (7) Allison HD 4560P six-speed automatic transmission
 - (8) Collision Warning System (CWS) that warns the driver of potentially dangerous driving situations by activating visual and audible alerts.
- e. For operation in arctic conditions, the M915A3 can be equipped with an arctic heater mounted under the cab, above the battery box. This provides heat for the cab and engine cooling system. The arctic heater may be operated prior to starting the engine to provide preheating of engine block.

EQUIPMENT DESCRIPTION AND DATA - CONTINUED

0002 00

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS



KEY	COMPONENT	DESCRIPTION
1	Marker Clearance Lights	Indicate outline of truck.
2	Side Mirrors (Heated)	Provide driver with a view of sides of truck and semitrailer, if towing.
3	Grabhandles	Provide a hand hold for personnel climbing on truck.
4	Utility Power Receptacle	Supplies power for work lights. Located on both sides of truck.
5	Air Horn	Provides an audible alert.
6	Master Battery Switch	Provides battery power to truck.
7	Spare Wheel and Tire	Extra wheel and tire used in case of a flat tire.
8	Battery Box and Steps	Holds vehicle batteries and provides steps to access cab.
9	Front Service Lights	Include headlights and turn signals.
10	Bumper Extensions	Provide adjustable attachment point for slings.
11	Blackout Lights	Used during blackout conditions. Include marker and drive lights.
12	Towing Eyes	Provide attachment points for towing device.

EQUIPMENT DESCRIPTION AND DATA - CONTINUED

0002 00**LOCATION AND DESCRIPTION OF MAJOR COMPONENTS - CONTINUED**

KEY	COMPONENT	DESCRIPTION
13	CWS Antenna	Forward looking collision warning system antenna.
14	Brush Guard	Protects front of hood and components under hood from damage.
15	Spotting Mirrors	Provide added visibility to sides and front of truck.