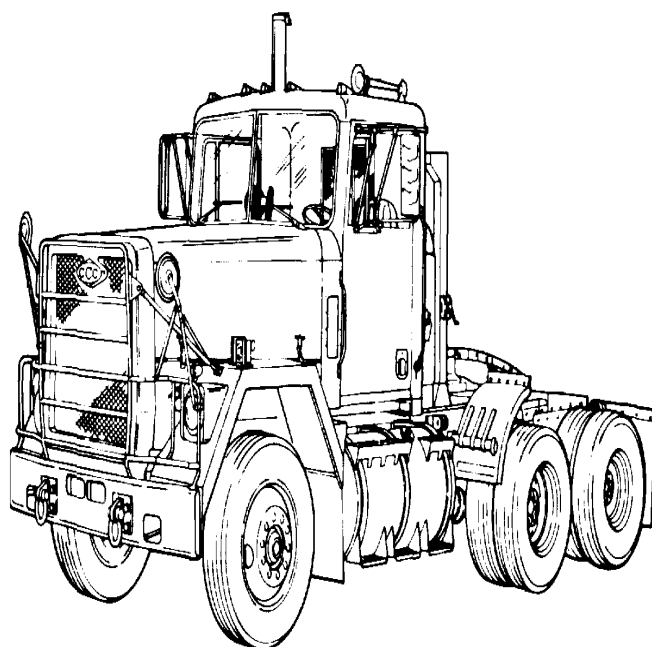


TECHNICAL MANUAL

**ORGANIZATIONAL
MAINTENANCE**

**TRUCK TRACTOR, LINE HAUL,
50,000 GVWR, 6 x 4, M915A1**

(NSN 2320-01-125-2640)



DECEMBER 1983

**HEADQUARTERS,
DEPARTMENT OF THE ARMY**

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DECEMBER 1983

ORGANIZATIONAL MAINTENANCE MANUAL

TRUCK TRACTOR, LINE HAUL,
50,000 GVWR, 6 X 4, M915A1

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 20282 located in the back of this manual directly to Commander, U.S. Army Tank Automotive Command, ATTN:DRSTAMB, Warren, MI 48090. A reply will be furnished to you.

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ALPHABETICAL INDEX		Index-1

HOW TO USE THIS MANUAL

As a maintenance technician, you are responsible for maintaining the equipment covered in this manual. The best way to do this is with the aid of your maintenance manual. Below is a sample problem.

PROBLEM: Vehicle operator reports that the engine cranks but fails to start.

1. Turn to the cover of your manual.

On the righthand side you will find a listing for "TROUBLESHOOTING." Along with the listing is a page number and a black marker. Follow either the page number reference or the black marker to the first page in the troubleshooting section.

2. What is the quickest way to find the solution to the problem?

Turn to paragraph 2-10.

This is the "TROUBLESHOOTING SYMPTOM INDEX." Follow the numerical listing "ENGINE" until you see item 2, "Engine cranks but fails to start." Now go to the page listed directly to the right of the malfunction.

3. What caused the problem?

Turn to paragraph 2-11.

These are the "TROUBLESHOOTING PROCEDURES." Locate the symptom "Engine cranks but fails to start." Here you will find the most likely causes of the problem. After following each step in the order listed and finding the problem, let's say, "The fuel solenoid valve is defective," go to the referenced paragraph.

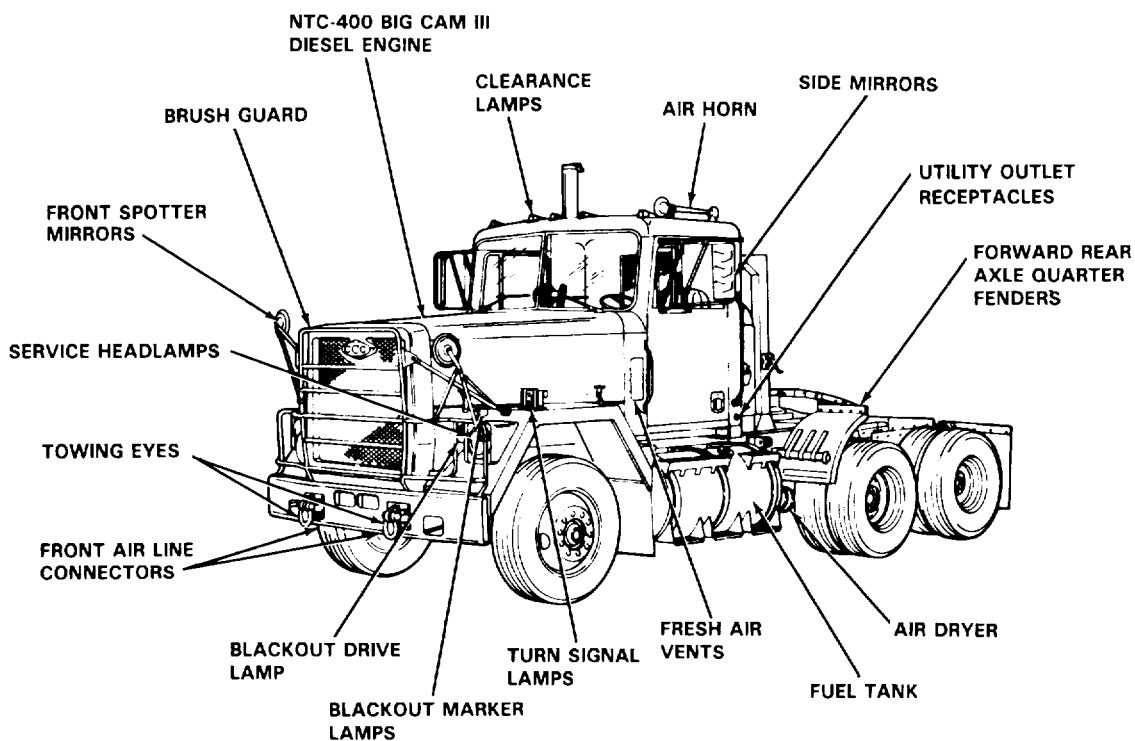
4. How do you fix the problem?

Turn to paragraph 3-33.

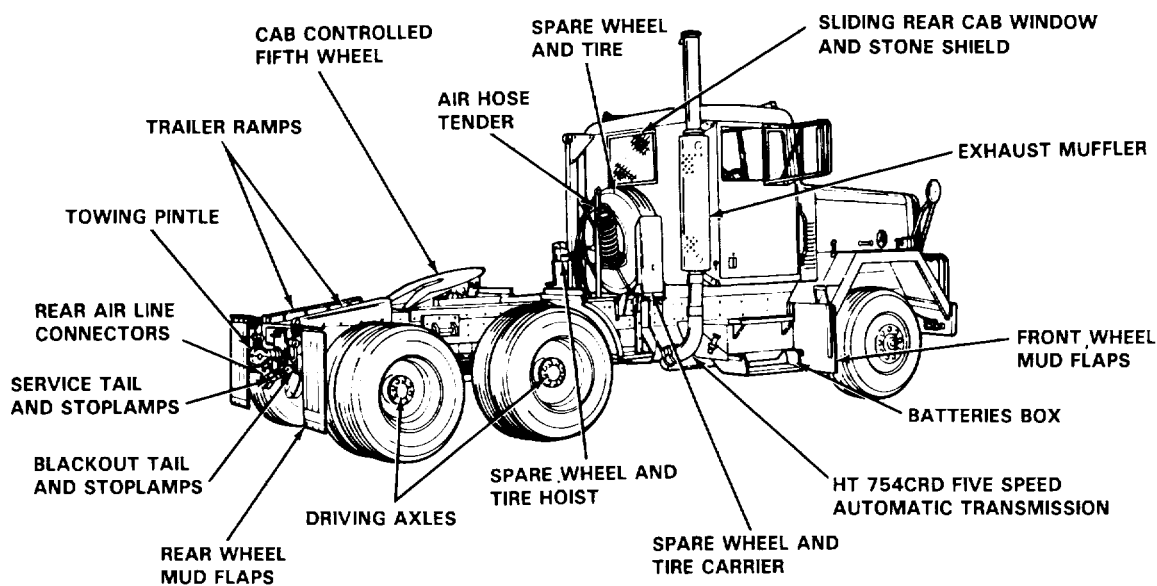
This is the maintenance procedure for the fuel solenoid valve. It is arranged step-by-step so everything you need to know to maintain the fuel solenoid valve is covered. Now you are ready to correct the problem.

Your maintenance manual is easy to use. You eliminate mistakes and are always made aware of the warnings and cautions you need to know for personnel and equipment safety.

The M915A1 Truck Tractor and equipment are non-metric and do not require any metric tools. Therefore, metric units are not supplied in this manual. Furthermore, for the sake of clarity, tactical instructions will also remain non-metric.



M915A1 - LEFT FRONT 3/4 VIEW.



M915A1- RIGHT REAR 3/4 VIEW.

CHAPTER 1

1-1. SECTION I. OVERVIEW

This chapter provides the following information:

- a. Forms and record data required for maintenance.
- b. Physical descriptions and data of major components
- c. Functional explanations of components maintained at the organizational level.

1-2. SCOPE

Type of Manual: Organizational maintenance.

Model Number and Equipment Name: M915A1, Truck Tractor, Line Haul, 50,000 GVWR, 6 x 4.

Purpose of Equipment: Used with the M-872 Trailer for on-road, line hauling of loads up to a gross vehicle weight rating of 50,000 lbs (30,000 lbs on fifth wheel).

1-3. MAINTENANCE FORMS, RECORDS, AND REPORTS.

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by TM 38-750, The Army Maintenance Management System.

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

Requirements and procedures for destruction of Army materiel to prevent enemy use are given in TM 750-244-6.

1-5. PREPARATION FOR STORAGE OR SHIPMENT.

Storage information is given in TM 740-90-1, Administrative Storage.

SECTION II. GENERAL INFORMATION.

1-6. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR).

If your M915A1 Truck Tractor 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 SF368 (Quality Deficiency Report). Mail it to us at: Commander, U.S. Army Tank Automotive Command, ATTN: DRSTAM, Warren, Michigan 48090. We'll send you a reply.

1-7. WARRANTY INFORMATION.

Warranty information can be found in TB9-2300-295-15/20 (M915A1 Warranty Bulletin).

1-8. SECTION II. EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES

The characteristics and capabilities of the M915A1 Truck Tractor are given in paragraphs 19 and 110. Two of the more important features that allow for ease of maintenance are:

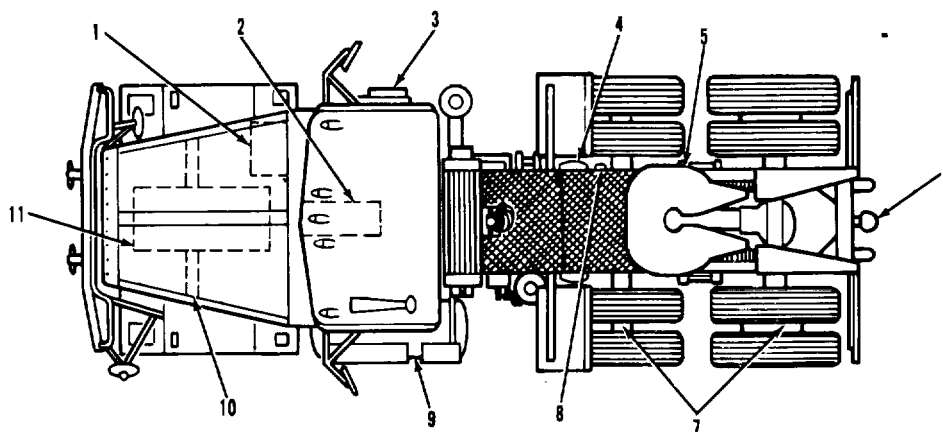
- a. Commercial-type replacement parts for entire vehicle available through national network of dealers and vendors.
- b. Commercial operating components that require no special maintenance procedures and a minimum of special tools:
 - (1) Six-cylinder, in-line, four-stroke, four-cycle, turbocharged diesel engine.
 - (2) Five speed automatic transmission.
 - (3) Rear tandem axles.

EQUIPMENT DESCRIPTION AND DATA.

1-9. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS.

a. Exterior Components.

The illustration below identifies the major exterior components located on the M915A1 vehicle. For more information, see the Operator's Manual. TM 9-2320-283-10.



1. AIR CLEANER. Heavy duty, tri-phase, dry type with automatic dust unloader.
2. TRANSMISSION. Automatic with five forward speeds and one reverse speed.
3. BATTERIES. Four, heavy duty, 12-volt, maintenance free, connected in series-parallel.
4. AIR BRAKE CHAMBER. Standard diaphragm, S-cam type.
5. FIFTH WHEEL. Slide mounted with air operated release.
6. TOWING PINTLE. Swivel type with a 49,000 lb maximum gross trailer weight capacity.
7. REAR TANDEM AXLES. Single reduction type.
8. REAR AXLE DIFFERENTIAL LOCKOUT. Air operated.
9. FUEL TANK. Aluminum with shallow dished heads and half baffle construction.
10. FRONT AXLE. Non-driving, steering type with I-beam construction.
11. ENGINE. In-line, six-cylinder, four stroke, four cycle, turbocharged diesel.

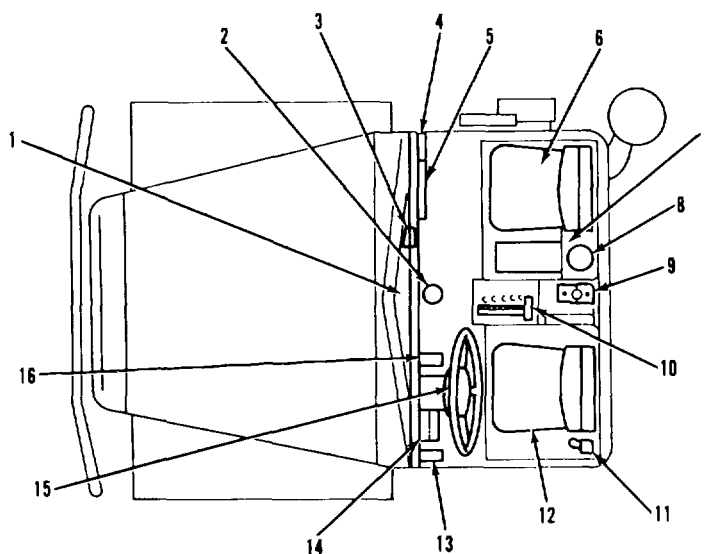
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EQUIPMENT DESCRIPTION AND DATA.

1-9. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS (Continued).

b. Interior Components.

The illustration below identifies the major interior components located on the M915A1 vehicle. For more information, see the Operator's Manual, TM 9-2320-283-10.



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EQUIPMENT DESCRIPTION AND DATA.

1-9. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS (Continued).

b. Interior Components (Continued).

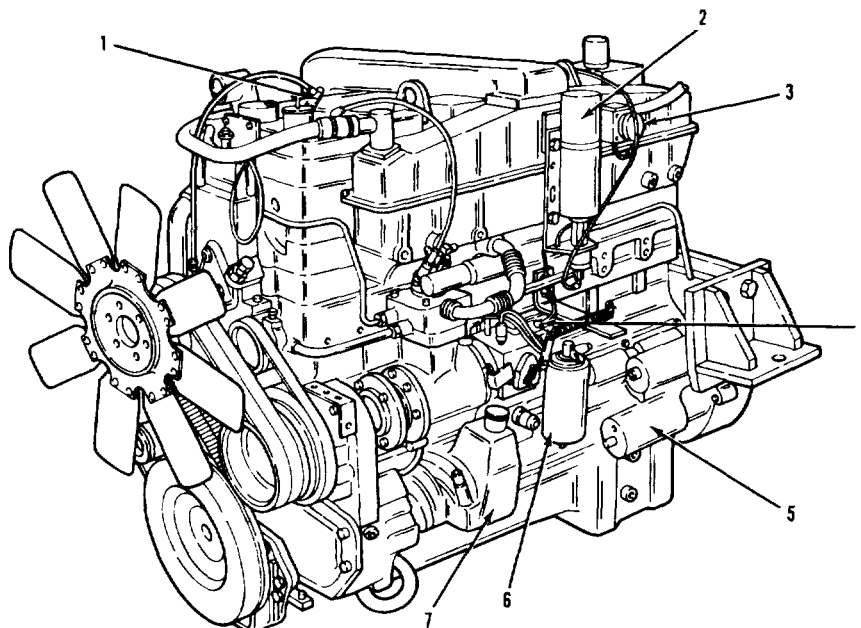
1. INSTRUMENT PANEL. Hinged type; used to house instrument gages and lamps.
2. WINDSHIELD WASHER RESERVOIR. Air pressure type.
3. DIFFERENTIAL LOCKOUT CONTROL. Three-way, two-position toggle valve.
4. VENTILATOR. Two-way hingeless type.
5. HEATER. Hot water type with two blower wheels.
6. COMPANION SEAT. Fully adjustable, shock mounted, bracket style.
7. TOOL BOX. Located under companion seat with two hinged doors for easy access.
8. FIRE EXTINGUISHER. Located behind tool box. Hand portable, stored pressure type.
9. FIFTH WHEEL RELEASE CONTROL. Three-way, two-position toggle valve.
10. TRANSMISSION SHIFTER CONTROL. Mounted to cab floor with cable type control.
11. AIR HORN VALVE. Mounted on cab roof above driver's door with chain type control.
12. DRIVER'S SEAT. Fully adjustable, suspension type.
13. ENGINE RETARDER FOOT PEDAL. Mounted on cab floor with electric switch control.
14. BRAKE PEDAL AND VALVE. Mounted on cab floor with dual type air control.
15. STEERING WHEEL. Fixed position, molded plastic type with steel reinforced sleeve.
16. ACCELERATOR PEDAL. Mounted on floor with linkage type control.

EQUIPMENT DESCRIPTION AND DATA.

1-9. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS (Continued).

c. Engine Components.

The Cummins NTC400 Engine is used on all M915A1 vehicles. It is an inline, six cylinder, four stroke, four cycle, turbocharged diesel engine. The engine is a common production diesel truck engine, without special operating or maintenance requirements. This subparagraph provides you with illustrations that identify engine components serviced at the organizational level.

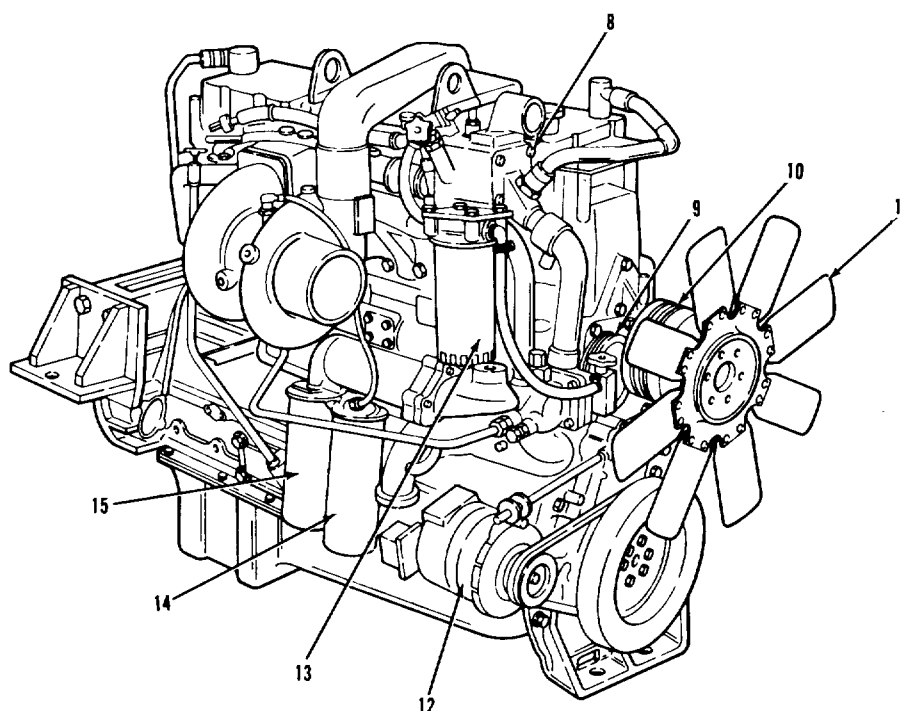


1. FAN CLUTCH AIR VALVE. Mechanically actuated, air control type.
2. ETHER QUICK START KIT. Electrically actuated with replaceable 18-oz ether container.
3. STE/ICE CONNECTOR. Standard circular type with bayonet coupling.
4. FUEL SOLENOID SHUTOFF VALVE. Electrically actuated, coil type.
5. STARTER MOTOR AND SOLENOID. 24-volt, heavy duty, water resistant type with an electric shift engagement, over-running clutch drive.
6. FUEL FILTER/WATER SEPARATOR. Spin-on type element with water draincock.
7. POWER STEERING PUMP AND RESERVOIR. Heavy duty, roll vane type with built in flow control and relief valve.

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EQUIPMENT DESCRIPTION AND DATA.

1-9. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS (Continued).

c. Engine Components (Continued).

- 8. THERMOSTAT. Located in cast housing. 180 degree blocking type.
- 9. WATER PUMP. Belt driven, eccentric type.
- 10. FAN CLUTCH. Pneumatically operated, thermostatically controlled.
- 11. FAN. 8-blade, clockwise rotating type.
- 12. ALTERNATOR. 14-volt, self load limiting type with a fully adjustable, built in, solid state voltage regulator.
- 13. WATER FILTER. Spin-on type element with chemical protection and positive filtration.
- 14. OIL FILTER. Full-flow, spin-on type element.
- 15. OIL FILTER. By-pass, spin-on type element.

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