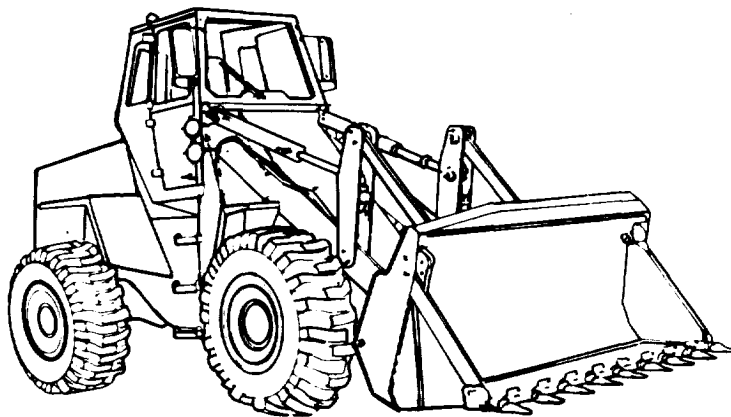


**TECHNICAL MANUAL
DIRECT SUPPORT
AND
GENERAL SUPPORT
MAINTENANCE**



**LOADER, SCOOP TYPE, DED
4x4, ARTICULATED FRAME STEER,
2-1/2 CUBIC YARD
(J. I. CASE MODEL MW24C)
(NSN 3805-01-150-4814)**

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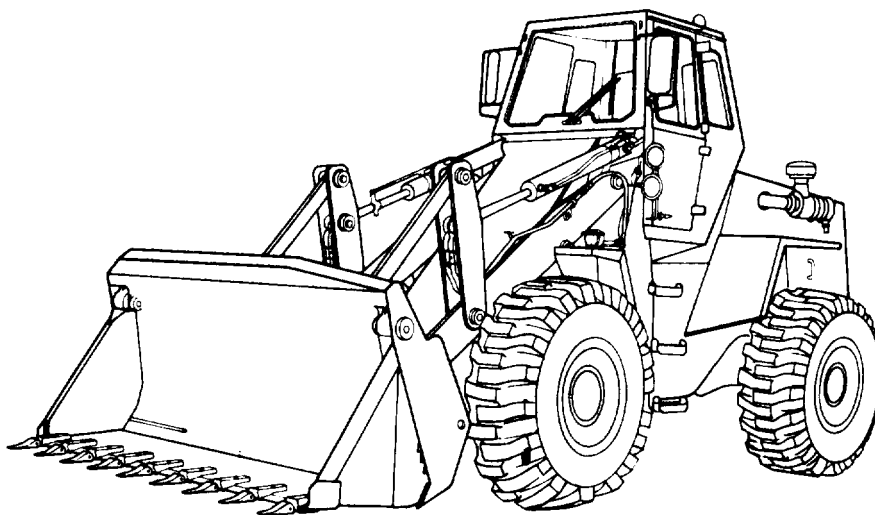
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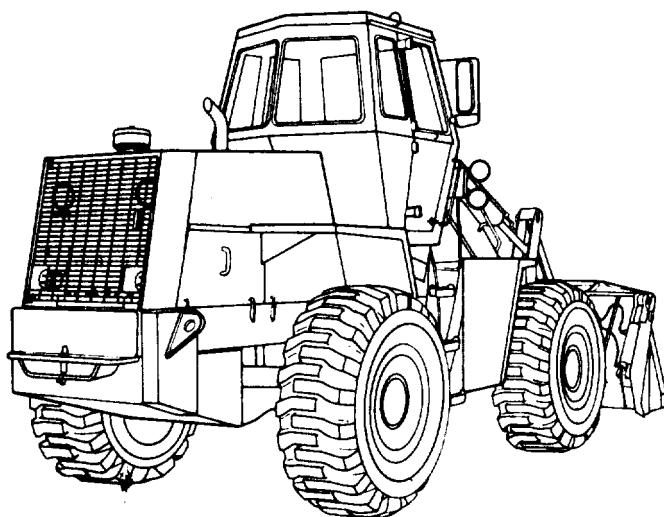
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Left Front View



Right Rear View

MW24C Loader

Technical Manual
TM5-3805-262-34

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C. 1 SEP 87

DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL

LOADER, SCOOP TYPE, DED, 4 X 4, ARTICULATED FRAME STEER,
2-1/2 CUBIC YARD
(J. I. CASE MODEL MW24C)
(NSN 3805-01-150-4814)

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, US Army Tank-Automotive Command, ATTN: AMSTA-MB, Warren, MI 48397-5000. A reply will be furnished to you.

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* This technical manual, in combination with TM 5-3805-262 series (-10, -20, and -24P) supersedes TM 5-3805-262-14&P-1 and TM 5-3805-262-14&P-2 in its entirety.

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HOW TO USE THIS MANUAL

This manual is designed to help you maintain the MW24C loader. It's divided into chapters, sections, and appendices. The chapters contain troubleshooting, direct support maintenance, and general support maintenance procedures. The chapters are divided into sections containing maintenance procedures for the various systems which comprise the loader.

The appendices contain supplemental information which you require to maintain the MW24C loader.

The maintenance procedures contained in this manual tell you several things:

..... what tools you need to do the job
 materials or parts required
 what condition the vehicle is to be in before work is started

In addition to text, you'll have either an assembled view or an exploded view illustration of the associated parts. The illustration is keyed to the text by numbers and shows you how to take the part off and put it on. The following problem will show some of the features of this manual.

PROBLEM

An MW24C loader has an engine problem which organizational maintenance was unable to correct: the engine lacks power. The best way to solve this problem is by using your manual. This is what you do:

1. How do you start?
 Look at the cover of the manual.
 On the cover you'll find a listing for TROUBLESHOOTING SYMPTOM INDEX. It tells you to go to page 2-1. To find page 2-1 fast, open the manual by using the black tab that lines up with the listing on the cover.
2. What kind of problem do you have?
 Find it in the symptom index.
 The symptom index is a list of problems covered by the chapter. It tells you that your problem, "engine stalls frequently or does not develop full power" is covered in paragraph 2-4, Malfunction entry number 7, page 2-27.
3. How do you determine what is causing the problem?
 Go to paragraph 2-4, Malfunction entry number 7, page 2-27.
 There you'll find the troubleshooting procedures you'll need. The procedure has columns with the headings: MALFUNCTION, TEST OR INSPECTION, and CORRECTIVE ACTION. Starting at step 1, read the procedure. Each step tells you what to do and what to look for. Follow the steps, in order, until you find your problem. When you find the problem, the CORRECTIVE ACTION column will tell you how to fix it.
4. Let's assume you've reached the step where the fuel injectors are to be tested.
 The TEST OR INSPECTION column refers you to page 3-110. You turn to that page and find paragraph 3-2a, Fuel Injector Nozzles. First check the introductory

HOW TO USE THIS MANUAL (CONT)

material. It tells you what' you need and what condition the vehicle is to be in before you start the job. You will also find an exploded-view illustration of the fuel injector nozzle parts that direct support maintenance has the responsibility to maintain. The procedure tells you how to remove and test the fuel injector nozzles and what to do if the nozzles are defective.

5. If, on the other hand, you know what the problem is and its cause, refer to the alphabetical index at the back of this manual and find the name of the part to be replaced and the page number where the procedure is to be found. For example, the engine is misfiring and, on examining the engine you notice that fuel is leaking from the fuel injection lines, indicating that the fuel injection lines require replacement. Referring to the alphabetical index under the listing Fuel Injection Lines, page 3-116 is referenced. Turn to this page for fuel injection line removal and installation procedures.

CHAPTER 1

INTRODUCTION

CHAPTER OVERVIEW

The purpose of this chapter is to provide you with standard data required in all manuals, to familiarize you with the purpose and capabilities of the vehicle, and to give you a brief description of its different systems and components.

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Section I. GENERAL INFORMATION

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Orientation	1-3
Common Tools and Equipment	1-4
Special Tools, TMDE, and Support Equipment	1-5
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NOTE

The equipment described herein is non-metric and does not require metric common or special tools; therefore, metric units are not supplied. Tactical instructions for sake of clarity will also remain non-metric.

1-1. SCOPE

- a. Type of Manual. Direct Support and General Support Maintenance Manual.
- b. Model Number and Equipment Name. MW24C 2-1/2 Cubic Yard Capacity, Articulated Frame Steer, 4 X 4, Diesel Engine Driven, Scoop Type Loader.
- c. Purpose of Equipment. Load trucks and rail cars and stockpile various materials. 4-in-1 bucket used as bucket, clam bucket, dozer, or scraper; bucket has 104 inch width and 2-1/2 cubic yard capacity.

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.

1-3. ORIENTATION

In the text, right hand and left hand are determined from the operators seat, facing toward the front of the loader. Confusion may result from unconventional orientation of the engine (it faces loader rear). In this manual, for example, engine rear refers to radiator end of engine since radiator is toward rear of vehicle. Keep in mind that location descriptions right, left, front, and rear are determined by applying the above rule.

1-4. COMMON TOOLS AND EQUIPMENT

For authorized common tools and equipment refer to the Modified Table of Organization and Equipment (MTOE) applicable to your unit.

1-5. SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

Refer to TM 5-3805-262-20 for list of TMDE.

1-6. REPAIR PARTS

Repair parts are listed and illustrated in the repair parts and special tools list TM 5-3805-262-24P covering organizational, direct support, and general support maintenance for the MW24C loader.

1-6.1 MODIFICATIONS

Refer to DA PAM 310-1 and DA PAM 750-10 for all published Modification Work Orders which apply to the MW24C Scoop Loader. Refer to Department of the Army Modification Work Order MWO 5-3805-262-25-001 (effective 1988) for Installation of Alcohol Evaporator.

Section II. EQUIPMENT DESCRIPTION AND DATA

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Equipment Characteristics, Capabilities, and Features	1-7
Location and Description of Major Components	1-8
Equipment Data	1-9

1-7. EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES

a. Purpose of MW24C Loader. Loading trucks and railcars from stockpiles, stockpiling materiel, and excavating undisturbed and compacted soil. Unit also used as a clamshell to handle irregular shaped objects, as a dozer for general bulldozer work, and as a scraper.

b. Capabilities and Features.

- (1) Two and one-half yard capacity bucket.
- (2) Operates over rough terrain.
- (3) Four speed ranges in forward; two speed ranges in reverse.
- (4) Declutch pedal disengages transmission during loader operation to provide maximum hydraulic power when needed.
- (5) Diesel engine driven.
- (6) Power steering.
- (7) Power assisted air over hydraulic brakes.
- (8) Enclosed operator's compartment.
- (9) Auxiliary steering automatically cuts-in if primary steering is disabled.
- (10) Bucket height control to automatically stop loader lift arms at a preselected dump height.
- (11) Bucket return-to-dig control to automatically return bucket to preselected position.
- (12) Four-in-one bucket used as a scraper, blade, clamshell, or standard bucket.
- (13) Ford depths up to 30 inches.
- (14) Collapsible steering wheel.

1-8. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS

ENGINE. J.I. Case Model A504BD Diesel engine having a displacement of 504 cubic inches. Accessories mounted on and considered a part of the engine include the alternator, air compressor, starting motor, fuel injection pump, and fuel filters.

FUEL SYSTEM. Consists of fuel injectors, fuel injection pump, electric fuel pump, air cleaner, fuel filters, and cold start kit.

EXHAUST SYSTEM. Consists of muffler and exhaust pipe. Muffler mounted on top of engine.

COOLING SYSTEM. Includes radiator mounted in rear of loader, thermostat and housing, engine driven water pump, and fan.

1-8. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS (CONT)

ELECTRICAL SYSTEM. 24 volt, negative ground. Includes engine driven alternator, starter motor, instrument panels, light system, and two 12 volt batteries connected in series.

BRAKES. Disk brakes, air over hydraulic. Air actuated drum type parking brake located on transmission output shaft.

STEERING SYSTEM. Consists of steering wheel, steering column and gear, and two steering cylinders. Power assist provided by hydraulic pump mounted on and driven by transmission. Also includes auxiliary steering system.

