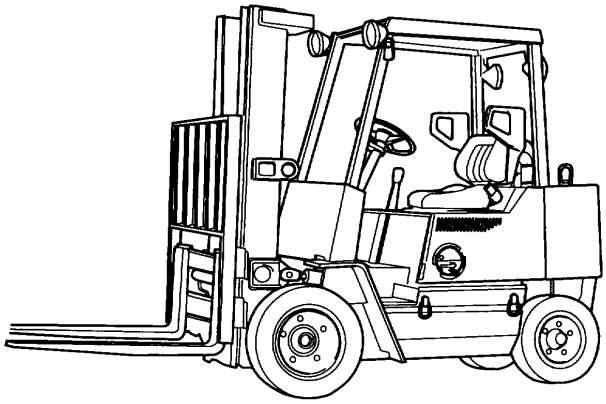
TECHNICAL MANUAL

ORGANIZATIONAL, DIRECT SUPPORT, AND GENERAL SUPPORT MAINTENANCE MANUAL



TRUCK, FORKLIFT, CLEAN BURN DIESEL, FRONT-LOADING, 4000 LB. CAPACITY, M483 CLARK MODEL GPX 25E DIESEL NSN 3930-01-384-5310

INTRODUCTION AND GENERAL INFORMATION	1-1
ORGANIZATIONAL TROUBLESHOOTING	2-1
ORGANIZATIONAL MAINTENANCE	3-1
DIRECT SUPPORT/GENERAL SUPPORT TROUBLESHOOTING	4-1
DIRECT SUPPORT/GENERAL SUPPORT MAINTENANCE	5-1
REFERENCES	A-1
MAINTENANCE ALLOCATION CHART(MAC)	B-1
EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST	C-1
SCHEMATICS AND DIAGRAMS	D-1
LUBRICATION ORDER	E-1
COMMERCIALPLANNED MAINTENANCE AND ADJUSTMENTS	F-1

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TECHNICAL MANUAL

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TECHNICAL MANUAL
ORGANIZATIONAL, DIRECT SUPPORT, AND GENERAL SUPPORT MAINTENANCE MANUAL

TRUCK, FORKUFT, CLEAN BURN DIESEL, FRONT-LOADING, 4000 LB. CAPACITY, M483 CLARK MODEL GPX 25E DIESEL

NSN 3930-01384-5310

REPORTING OF ERRORS

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 and Armaments Command, ATTN: AMSTA-IM-OPIT, Warren, MI 48397-5000. 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-IM-OPIT is: (810) 574-6323 and the e-mail address is: amstaim-mmaa @ cc.tacom.army. mil.

This manual is an authentication of the manufacturer's commercial literature and does not conform with the format and content specified in AR 25-30, Military Publications. This technical manual does, however, contain available information that is essential to the operation and maintenance of the equipment.

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TABLE OF CONTENTS

Chap/Para	Title	Page
LIST OF ILLUSTRATIONS		vii
LIST OF TABLES		vii
SAFETY SUMMARY		viii
General Precautions		viii
General Safety Practices		viii
Safety Suggestions for Operating Truck		ix
Safety Suggestions for Servicing Truck		ix
1	**INTRODUCTION AND GENERAL INFORMATION**	1-1
1-1	Introduction	1-1
1-2	Capabilities	1-1
1-3	Description	1-1
1-4	Performance Characteristics	1-6
1-5	Environmental Information	1-6
1-6	Maintenance Forms, Records, and Reports	1-6
1-7	Destruction of Army Material to Prevent Enemy Use	1-6
1-8	Reporting Equipment Improvement Recommendation (EIR)	1-6
1-9	Tools and Test Equipment	1-6
1-10	Shipping and Handling Instructions	1-6
1-11	Storage Data	1-6
2	**ORGANIZATIONAL TROUBLESHOOTING**	2-1
2-1	Troubleshooting Introduction	2-1
2-2	Troubleshooting Symptoms	2-1
2-3	Unit Troubleshooting Procedures	2-1
3	**ORGANIZATIONAL MAINTENANCE**	3-1
3-1	Maintenance Introduction	3-1
3-2	General Removal Instructions	3-1
3-3	General Disassembly Instructions	3-1
3-4	General Cleaning Instructions	3-2
3-5	General Inspection Instructions	3-3
3-6	General Repair Instructions	3-4
3-7	General Assembly and Installation Instructions	3-5
3-8	PMCS Introductory Material	3-6
3-9	Maintenance Forms and Records	3-6
3-10	General PMCS Procedures and Conditions	3-6
3-11	Fluid Leakage Definition	3-8
3-12	PMCS Table Description	3-8
3-13	Torque Limits	3-12
3-14	Oil Sampling Valve Replacement	3-16
3-15	Engine Oil Breather Cap Assembly Replacement	3-20
3-16	Fuel System Service	3-21
3-17	Fuel System Repair	3-23
3-18	Air Intake System Replacement	3-39
3-19	Exhaust System Replacement	3-42
3-20	Alternator Replacement	3-44
3-21	Regulator Replacement	3-45
3-22	Electrical Component Replacement	3-47
3-23	Directional Control Switch Assembly Replacement	3-66
3-24	Flood and Stop Light Replacement/Repair	3-67
3-25	Battery Replacement	3-71
3-26	Battery Cable Replacement	3-74
3-27	Battery Cable Service	3-76
3-28	Parking Brake Lever Replacement	3-78
3-29	Brake System Repair	3-79
3-30	General Hydraulic Hose Replacement	3-84
3-31	General Hydraulic Piping Replacement	3-88
3-32	Hydraulic Reservoir Replacement	3-90
3-33	Hydraulic Oil Filter Base Assembly Repair	3-92
3-34	Lifting Eye and Tiedown Replacement	3-94
3-35	Overhead Guard Replacement	3-95
3-36	Body Panel Replacement	3-97
3-37	Seat Assembly Replacement/Repair	3-109
3-38	Insulation Replacement	3-112
4	**DIRECT SUPPORT/GENERAL SUPPORT TROUBLESHOOTING**	4-1
4-1	Troubleshooting Introduction	4-1
4-2	Troubleshooting Symptoms	4-1
4-3	DS/GS Troubleshooting Procedures	4-1
5	**DIRECT SUPPORT/GENERAL SUPPORT MAINTENANCE**	5-1
5-1	Maintenance Introduction	5-1
5-2	General Removal Instructions	5-1
5-3	General Disassembly Instructions	5-1
5-4	General Cleaning Instructions	5-2
5-5	General Inspection Instructions	5-3
5-6	General Repair Instructions	5-4

TABLE OF CONTENTS

Chap/Para	Title	Page
5-7	General Assembly and Installation Instructions	5-5
5-8	PMCS Introductory Material	5-6
5-9	Maintenance Forms and Records	5-6
5-10	Fluid Leakage Definition	5-6
5-11	Torque Limits	5-7
5-12	Engine Balancer Repair	5-11
5-13	Rear Endplate Replacement	5-15
5-14	Starter Adapter Plate Replacement	5-16
5-15	Rocker Arm Replacement	5-17
5-16	Oil Filter Adapter Replacement	5-19
5-17	Manifold Replacement	5-20
5-18	Fuel Injector Line Replacement	5-22
5-19	Fuel Injector Pump Cover Repair	5-24
5-20	Starter Motor Repair	5-26
5-21	General Wire Harness Replacement/Repair	5-30
5-22	Main Frame Inspection	5-36
5-23	Hydraulic Pump Repair	5-37
5-24	Carriage Assembly Repair	5-42
5-25	Roller Sheave Repair	5-47
5-26	Lift Cylinder Replacement/Repair	5-49
5-27	Side Shift Cylinder Repair	5-57
5-28	Upright Repair	5-59
A	**REFERENCES**	A-1
A-1	Scope	A-1
A-2	Publication Index	A-1
A-3	Forms	A-1
A-4	Other Publications	A-1
B	**MAINTENANCE ALLOCATION CHART (MAC)**	B-1
	SECTION I. INTRODUCTION	B-1
B-1	General	B-1
B-2	Maintenance Functions	B-1
B-3	Explanation of Columns in Section II	B-2
B-4	Explanations of Columns in Tools and Test Equipment Requirements, Section III	B-3
	SECTION II. MAINTENANCE ALLOCATION CHART	B-4
	SECTION III. TOOLS AND TEST EQUIPMENT REQUIREMENTS	B-18
	SECTION IV. REMARKS	B-19
C	**EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST**	C-1
C-1	Scope	C-1
C-2	General	C-1
D	**SCHEMATICS AND DIAGRAMS**	D-1
D-1	Introduction	D-1
E	**LUBRICATION ORDER**	E-1
E-1	General Lubrication Instructions	E-1
F	**COMMERCIAL PLANNED MAINTENANCE AND ADJUSTMENTS**	F-1
1.0	**GENERAL INFORMATION**	F-7
2.0	**SPECIFICATIONS**	F-17
3.0	**PLANNED MAINTENANCE**	F-35
3.1	PM Schedules	F-37
3.2	Planned Maintenance Procedures	F-41
3.3	Machine Jacking and Blocking	F-59
4.0	**ENGINE**	F-63
4.1	Engine Maintenance	F-65
4.2	Engine Troubleshooting	F-67
4.3	Engine Tune-Up	F-73
4.4	Deleted	
4.5	Engine Valve Clearance Adjustment	F-79
4.6	Engine Compression Pressure Test	F-83
4.7	Engine RPM & Stall Tests	F-87
4.8	Cooling System	F-93
4.9	Engine Air Cleaner	F-103
4.10	Engine Adjustments	F-107
4.11	Engine Removal	F-111
4.12	Deleted	
4.13	Engine Components	F-119
4.14	Continental Diesel Engine	F-125
5.0	**FUEL SYSTEM**	F-195
5.1	Fuel Systems Maintenance	F-197
5.2	Deleted	

TABLE OF CONTENTS

Chap/Para	Title	Page
5.3	Diesel Fuel Injection System	F-199
5.4	Deleted	
5.5	Deleted	
5.6	Deleted	
5.7	Deleted	
5.8	Deleted	
5.9	Deleted	
5.10	Deleted	
5.11	Fuel Injection Pump	F-209
6.0	**ELECTRICAL SYSTEM**	F-255
6.1	Electrical System Wiring	F-257
6.2	Deleted	
6.3	Deleted	
6.4	Deleted	
6.5	Deleted	
6.6	Deleted	
6.7	Deleted	
6.8	Alternator Maintenance	F-261
6.9	Prestolite Alternator Service Manual	F-267
6.10	Deleted	
6.11	Starting System Troubleshooting	F-297
6.12	Starter Motor Troubleshooting	F-307
6.13	Deleted	
6.14	Deleted	
6.15	Deleted	
6.16	Starter Maintenance	F-311
7.0	**TRANSAXLE**	F-317
7.1	Transaxle Maintenance	F-319
7.2	Transmission Troubleshooting	F-323
7.3	Transmission Pressure Checks	F-327
7.4	Transaxle Mounting Removal/Installation	F-329
7.5	Transaxle Overhaul-General Procedures	F-341
7.6	TA18 Transaxle	F-345
7.7	Deleted	
7.8	Deleted	
7.9	Deleted	
7.10	Deleted	
7.11	Deleted	
7.12	Directional Control Linkage	F-379
8.0	**BRAKES**	F-381
8.1	Service Brake & Inching Systems	F-383
8.2	Deleted	
8.3	Deleted	
8.4	Brake & Inching System	F-385
8.5	Brake Bleeding	F-395
9.0	**STEERING SYSTEM**	F-401
9.1	Power Steering System-Relief Pressure Setting	F-403
9.2	Steering Column and Valve	F-405
9.3	Steering Column-Removal/Installation	F-407
9.4	Steering Valve Overhaul	F-413
9.5	Steer Axles	F-419
9.6	Steer Axle-Wheel Bearing Maintenance	F-421
9.7	Steer Axle-Removal/Installation	F-425
9.8	Deleted	
9.9	Deleted	
9.10	Deleted	
9.11	Deleted	
9.12	Steer Axle Overhaul	F-431
9.13	Steering Cylinder Overhaul	F-441
10.0	**HYDRAULIC SYSTEM**	F-445
10.1	Hydraulic Sump-Fluid and Filter Change	F-449
10.2	Hydraulic System Relief Pressure Check & Adjustment	F-455
10.3	Main Hydraulic Pump	F-457
10.4	Deleted	
10.5	Main Hydraulic Valve	F-459
10.6	Main Hydraulic Valve Overhaul	F-465
10.7	Tilt Cylinder Maintenance	F-471
11.0	**WHEEL & TIRES**	F-481
11.1	Tire and Wheel Maintenance	F-483
11.2	Deleted	

TABLE OF CONTENTS-CONTINUED

Chap/Para	Title	Page
12.0	**COUNTERWEIGHT & CHASSIS**	F-485
12.1	Counterweight Maintenance	F-487
12.2	Deleted	
13.0	**UPRIGHT MAINTENANCE**	F-495
13.1	Upright Maintenance	F-497
13.2	Deleted	
13.3	Triple Stage Upright	F-507
14.0	**INDEX**	F-513
14.1	Section Contents Index	F-514
14.2	Subject Index	F-526
ALPHABETICAL INDEX		Index-1

LIST OF ILLUSTRATIONS

Figure	Title	Page
1-1	M483 4K Forklift Truck - Left Front View (Sheet 1 of 2)	1-2
1-1	M483 4K Forklift Truck - Right Rear View (Sheet 2 of 2)	1-3

LIST OF TABLES

Table	Title	Page
1-1	Description	1-4
2-1	Unit Troubleshooting Symptom Index	2-1
2-2	Unit Troubleshooting Procedures	2-2
3-1	Unit Preventive Maintenance Checks and Services	3-9
3-2	U.S. Standard Torque Values (Wet)	3-12
3-3	U.S. Standard Torque Values (Dry Fasteners)	3-13
3-4	Metric Torque Values (Dry Fasteners)	3-14
3-5	Metric Torque Values (Phosphate Coated Engine Fasteners)	3-14
3-6	Critical Fastener Torque Values (Dry)	3-15
4-1	DS/GS Troubleshooting Symptom Index	4-1
4-2	DS/GS Troubleshooting Procedures	4-2
5-1	U.S. Standard Torque Values (Wet)	5-7
5-2	U.S. Standard Torque Values (Dry Fasteners)	5-8
5-3	Metric Torque Values (Dry Fasteners)	5-9
5-4	Metric Torque Values (Phosphate Coated Engine Fasteners)	5-9
5-5	Critical Fastener Torque Values (Dry)	5-10

SAFETY SUMMARY
GENERAL PRECAUTIONS

The following are general safety precautions and instructions that personnel must understand and apply during many phases of operation and maintenance to ensure personnel safety and health. Portions of this information may be repeated in certain chapters of this publication for emphasis.

Cleaners/Chemicals Handling

Keep cleaners/chemicals in approved safety containers and in minimum quantities. Some cleaners/ chemicals may have an adverse effect on skin, eyes and respiratory tract. Observe manufacturer's WARNING labels and current safety directives. Use cleaners/chemicals only in authorized areas. Consult the local Bioenvironmental Engineer for specific precautions, protective equipment, and ventilation requirements.

Compressed Air
Use of compressed air can create an environment of propelled foreign particles. Air pressure shall be reduced to less than 30 pounds-per-square-inch gauged (psig) and used with effective chip guarding and personal protective equipment.

Batteries
When inspecting batteries, never smoke or expose battery to sparks of flames. Eye protection (face shield), acid resistant rubber apron and gloves must be worn when working around batteries.

Jewelry
Jewelry (rings, bracelets, metal watches, or neck chains) shall not be worn while working on exposed equipment.

Personal Protective Equipment
Wear protective clothing/equipment (gloves, apron, eye protection, protective mask, etc.) approved for the materials, procedures and tools being used as necessary.

GENERAL SAFETY PRACTICES
Read and thoroughly understand all instructions contained in this and all vendor manuals before attempting to operate or service the 4K Forklift Truck.

Only the operator is allowed on the truck during operation.

Clothing worn by all personnel working close to the truck should be close fitting and belted. Loose jackets, shirts, or pants should never be worn because of the danger of getting caught in moving parts.

Be certain that hand brake is set and the direction speed control levers and all switches are in the **OFF** or centered positions before starting the engine.

Make sure everyone is clear of the truck before starting so they cannot be struck by or caught in moving parts.

Keep operator's platform clean. Do not use it as a place to carry loose tools, lunch boxes, etc.

Refuel truck only when engine has been shut off. Do not permit sparks, open flames or smoking within 50 feet of truck when refueling.

Escaping hydraulic fluid under pressure can have sufficient force to penetrate the skin, causing serious personal injury. Before disconnecting lines, be sure to relieve all pressure. Before applying pressure to a system, be sure all connections are tight and that lines, tubes, and hoses are not damaged. Fluid escaping from a very small hole can be almost invisible. Use a piece of cardboard or wood, rather than hands, to search for suspected leaks.

If injured by escaping fluid, get medical attention at once. Serious infection or reaction can result if proper medical treatment is not administered immediately.

SAFETY SUMMARY - Cont.

Refill the radiator only when the engine is stopped. The truck has a pressure cooling system. To avoid being scalded when radiator cap is removed, first turn cap slightly to the stop which allows steam to escape through the overflow pipe. After all pressure is relieved, remove cap.

Never lubricate or service truck when it is operating.

SAFETY SUGGESTIONS FOR OPERATING TRUCK

Be sure all hoods and doors are closed before operating truck.

Be certain the direction/range control levers are in NEUTRAL positions before starting engine.

Check all functions of the truck for proper operation. Never attempt to use a malfunctioning machine.

Never permit anyone to climb or stand on the truck.

Keep all persons clear of forks when operating truck.

Before leaving the operator's seat always be sure that all control switches are in the **OFF** or centered position, hand brake is applied, forks are lowered, and engine is shut off.

Never attempt to attach or remove any part or assembly on the truck while it is operating.

SAFETY SUGGESTIONS FOR SERVICING TRUCK

Before attempting to service, attach, or remove any part of assembly on the truck, make certain that:

(1) All controls and switches are in the OFF or centered position.
(2) Hand brake is applied.
(3) Forks are lowered.
(4) Engine is shut off unless otherwise instructed.

Batteries produce explosive gases. Keep all sparks and open flames away from batteries. If a battery needs recharging, avoid sparks by turning off the charger before making connections or disconnections.

Sulfuric acid in batteries is a poison and could cause severe burns. Avoid contact with skin, eyes, and clothing. When working around batteries, protect eyes and face from battery fluid and possible explosion.

Before starting the engine, be sure there is plenty of ventilation. If it is necessary to operate the engine inside an enclosed service area, be sure exhaust is properly vented.

Make sure everyone is clear of the truck before starting so they cannot be struck by or caught in moving parts.

CHAPTER 1
INTRODUCTION & GENERAL INFORMATION

1-1. INTRODUCTION.

a. Purpose of This Manual. This is a supplemental manual designed to provide information concerning troubleshooting and maintenance at the Organizational, Direct Support, and General Support levels not already covered in vendor manuals for the M483, 4000 lb Forklift Truck, hereafter referred to as the truck, manufactured by Clark Material Handling Company, Lexington, KY, model GPX 25E Diesel (See Figure 1-1). This manual contains the following:

(1) **Chapter 1 Introduction and General Information**: General information about the makeup of this manual, including a general description of the truck and specifications table, are presented in this chapter.

(2) **Chapter 2 Organizational Troubleshooting**: Instructions for troubleshooting at the organizational level are presented in this chapter.

(3) **Chapter 3 Organizational Maintenance**: Instructions for performance of maintenance procedures at the Organizational level are presented in this chapter.

(4) **Chapter 4 Direct Support/General Support Troubleshooting**: Instructions for troubleshooting at the Direct Support/General Support level are provided in this chapter.

(5) **Chapter 5 Direct Support/General Support Maintenance**: Instructions for maintenance procedures at the Direct Support/General Support levels are provided in this chapter.

(6) **Appendices**: Instructions for lubrication and Army-specific and vendor-specific information are arranged as appendices.

b. Function of This Manual. This manual provides instructions, illustrations, and associated data for maintenance and repairs. This manual shall enable an average journeyman to maintain and repair the truck.

c. WARNINGS, CAUTIONS, and NOTES. Warnings, cautions, and notes used in this manual are defined as:

(1) A “warning” identifies an operation or maintenance procedure, practice, condition, statement, etc., which, if not strictly observed, could result in damage to, or destruction of, equipment, and/or injury or loss of life.

(2) A “caution" identifies an operation or maintenance procedure, practice, condition, statement, etc., which, if not strictly observed, could result in damage to, or destruction of, equipment or loss of mission effectiveness.

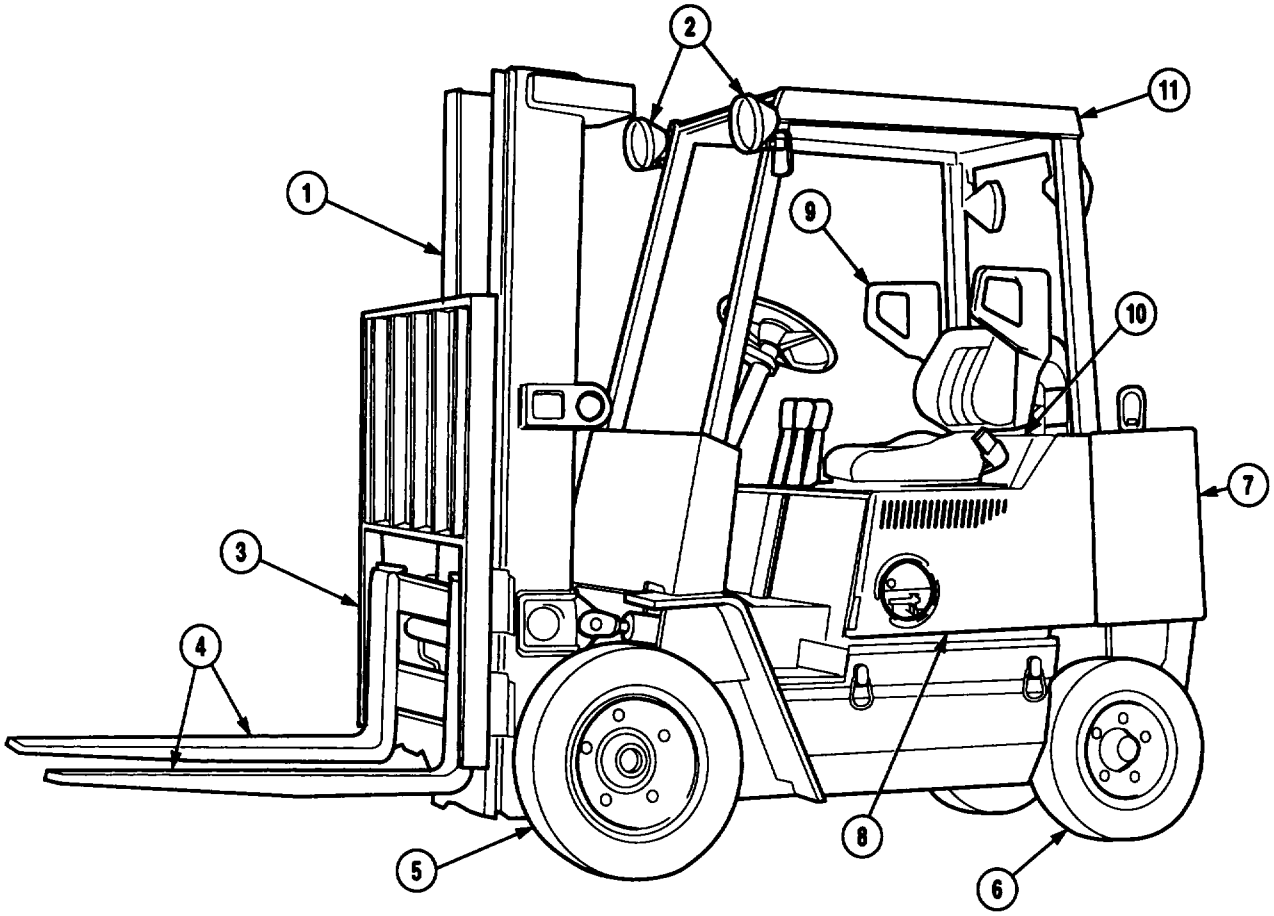
(3) A “note” highlights an essential operation or maintenance procedure, condition, or statement.

1-2. CAPABILITIES.

The truck is a 4-wheeled piece of material handling equipment capable of lifting palletized and certain loose loads, when appropriate, up to a maximum weight of 4000 lb (1814.4 kg). Over smooth and level surfaces, the truck can reach a maximum speed of 12 mph (19.3 kph) unloaded and 11.3 mph (18.1 kph) with a full load when safety conditions merit.

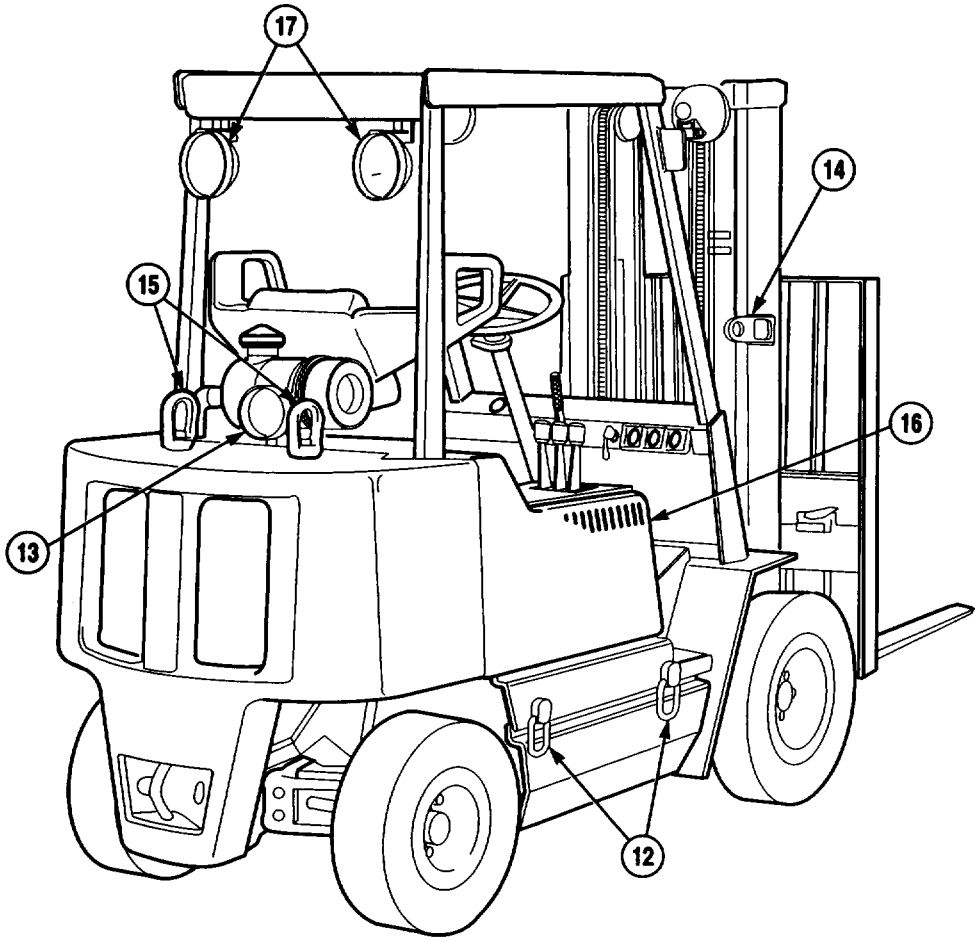
1-3. DESCRIPTION.

Single, solid rubber wheels in front of truck provide stability and ruggedness. Safety equipment consists of an automotive horn operable from steering wheel. Two floodlights on the overhead guard help illuminate the area in front of the truck while two floodlights in the back of the overhead guard illuminate the area behind truck. A brake light at the back of truck illuminates whenever brake or inching pedal is depressed.



1. Mast Assembly
2. Front Floodlights
3. Carriage Assembly
4. Forks
5. Front Wheels
6. Rear Wheels
7. Counterweight
8. Left-Side Hood
9. Operator's Seat
10. Top Hood
11. Overhead Guard

Figure 1-1. M483 4K Forklift Truck - Left Front View (Sheet 1 of 2)



12. Tie Downs
13. Brakelight
14. Front Lift Point
15. Rear Lifting Brackets
16. Right-Side Hood
17. Rear Floodlights

Figure 1-1. M483 4K Forklift Truck - Right Rear View (Sheet 2 of 2)