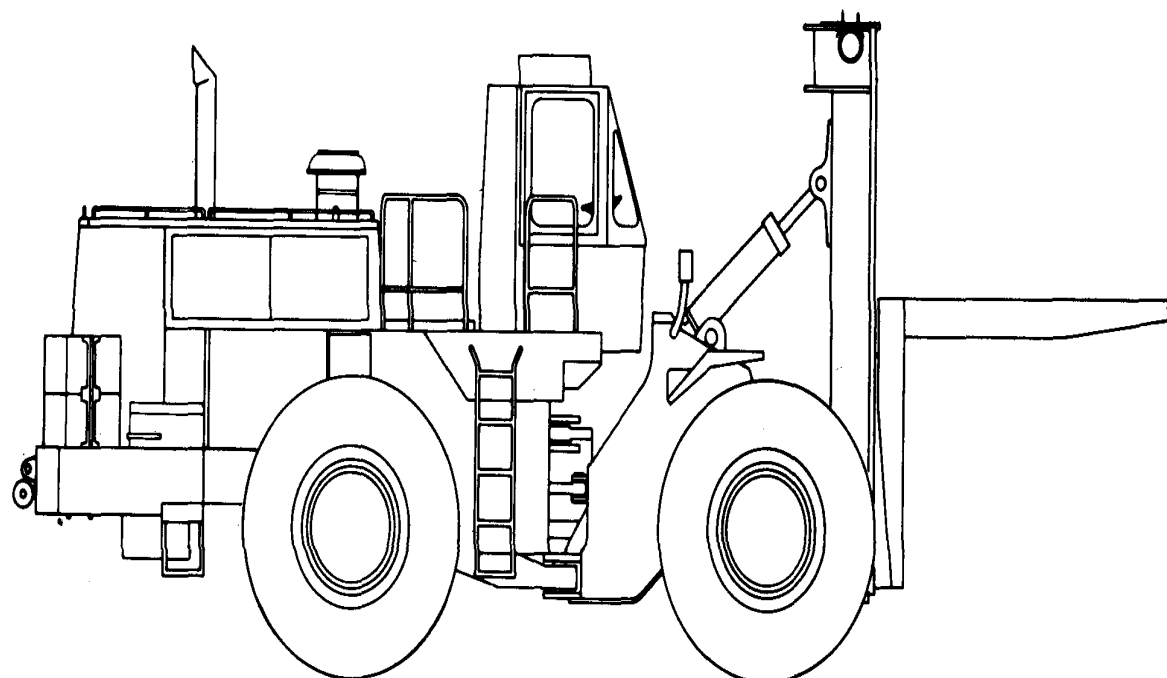


**TECHNICAL MANUAL
DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL**



**TRUCK, CONTAINER HANDLER
ROUGH TERRAIN, 50,000 LB CAPACITY
DED, PT, NSN 3930-01-082-3758
WITH TOPHANDLER(S)**

**TABLE OF CONTENTS
PAGE v**

**GENERAL INFORMATION
PAGE 1-2**

**EQUIPMENT DESCRIPTION
AND DATA
PAGE 1-3**

**REPAIR PARTS
PAGE 2-2**

**TROUBLESHOOTING
SYMPTOMS INDEX
PAGE 2-4**

**GENERAL MAINTENANCE
PAGE 2-64**

**INDEX OF SPECIFICATIONS
PAGE 2-69**

DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL
TRUCK, CONTAINER HANDLER: ROUGH TERRAIN 50,000 LB
CAPACITY, DED, PT, NSN 3930-01-082-3758 WITH TOPHANDLER(S)**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, U.S. Army Tank-Automotive Command, ATTN: AMSTA-MB, Warren, MI 48397-5000. A reply will be furnished to you.

	VOLUME I	Page
CHAPTER 1	INTRODUCTION.....	1-1
Section I.	General Information.....	1-2
Section II.	Equipment Description and Data.....	1-3
CHAPTER 2	DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE INSTRUCTIONS.....	2-1
Section I	Repair Parts Special Tools and Equipment	2-2
Section II	Troubleshooting.....	2-3
Section III	General Maintenance	2-64
Section IV	Specifications	2-69
CHAPTER 3	ENGINE MAINTENANCE INSTRUCTIONS	3-1
Section I	Engine Removal/Installation.....	3-2
Section II	Fuel System Maintenance.....	3-26
Section III	Air Inlet and Exhaust System	3-106
Section IV	Engine Lubrication System.....	3-133
Section V	Cooling System	3-151

		Page
Section VI	Electrical System Maintenance	3-175
Section VII	Rocker Shaft Components	3-206
Section VIII	Cylinder Heads.....	3-216
Section IX	Valve Components	3-254
Section X	Camshaft	3-272
Section XI	Timing Gears and Accessory Drive Gears	3-287
Section XII	Flywheel	3-308
Section XIII	Crankshaft and Main Bearings	3-320
Section XIV	Piston and Connecting Rods.....	3-349

	VOLUME II	
CHAPTER 4	POWER TRAIN MAINTENANCE INSTRUCTIONS	4-1
Section I	General.....	4-1
Section II	Torque Converter	4-6
Section III	Transmission	4-7, 4-42
Section IV	Oil System	4-178
Section V	Control Valves and Control Locks	4-201
Section VI	Front Axle	4-241
Section VII	Rear Axle	4-262
Section VIII	Drive Shafts.....	4-305

	Page
CHAPTER 5	BRAKE SYSTEM AND WHEELS
	MAINTENANCE INSTRUCTIONS..... 5-1
Section I	General..... 5-2
II	Accumulator 5-4
III	Brakes and Control Valves..... 5-25
IV	Parking Brake..... 5-60
V	Wheels and Tires 5-79
CHAPTER 6	STEERING SYSTEM MAINTENANCE
	INSTRUCTIONS..... 6-1
Section I	General..... 6-1
II	Steering Components..... 6-6
CHAPTER 7	HYDRAULIC SYSTEM MAINTENANCE
	INSTRUCTIONS 7-1
Section I	General..... 7-2
II	Hydraulic Lift System Components 7-4
III	Mast Components 7-70

CHAPTER 8	BODY AND CAB MAINTENANCE
	INSTRUCTIONS 8-1
Section I	Cab and Rollover Protective Structure (ROPS) 8-2
II	Cab Components 8-18
III	Body and Platform 8-38
CHAPTER 9	TOPHANDLER MAINTENANCE
	INSTRUCTIONS 9-1
APPENDIX	A REFERENCES A-1
	B EXPENDABLE ITEMS AND MATERIALS LIST B-1
	C ILLUSTRATED LIST OF MANUFACTURED ITEMS AND SPECIAL TOOLS..... C-1
	D TORQUE VALUES D-1
INDEX	 Index 1

CHAPTER 1
INTRODUCTION

		Page			Page		
Section	I.	General Information.....	1-2	Section	II.	Equipment Description and Data	1-3
		Scope	1-2			Equipment Purpose, Capabilities and	
		Maintenance Forms, Records and Reports	1-2			Features	1-3
		Reporting of Equipment Improvement				Equipment Weights and Center of	
		Recommendations (EIR)	1-2			Gravity	1-4
		Warranty Information	1-3				

Section I. GENERAL INFORMATION

SCOPE

Type of Manual: Direct Support and General Support Maintenance

Model Number and Equipment Name: Rough Terrain Container Handler (RTCH)

Purpose of Equipment: Load and unload shipping containers

MAINTENANCE FORMS, RECORDS AND REPORTS

Maintenance forms, records, and reports which are to be used by maintenance personnel at all maintenance levels are listed in and prescribed by I DA Pam 738-750, The Army Maintenance Management System (TAMMS).

REPORTING OF EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)

EIR can and must be submitted by anyone who is aware of an unsatisfactory condition with the equipment design or use. It is not necessary to show a new design or list a better way to perform a procedure, just simply tell why the design is unfavorable or why a procedure is difficult. EIR may be submitted on SF 368 (Quality Deficiency Report). Mail directly to Commander, U.S. Army Tank-Automotive Command, Warren, MI 48397-5000, ATTN: AMSTA-QRD. We'll send you a reply.

Change 1 1-2

WARRANTY INFORMATION

The Rough Terrain Container Handler is warranted by Caterpillar Tractor Co. for 15 months or 1500 hours of operation, whichever comes first. Warranty starts on the date found on DA Form 2410 or DA Form 2408-16 in the log book. Report all defects in material or workmanship to your supervisor, who will take appropriate action.

Section II. EQUIPMENT DESCRIPTION AND DATA

Refer to TM 10-3930-641-20 for a description of the vehicle and its major components, operating and performance data, and dimensions. Refer to page 2-69 for wear, fits, tolerances and torque values for assemblies and subassemblies of the vehicle.

EQUIPMENT PURPOSE, CAPABILITIES AND FEATURES

PURPOSE

1. Handles ISO (International Standards Organization) designation 1A or 1C cargo containers or Sealand Containers.
2. Handles and stacks containers.

3. Loads and unloads flatbed trailers and rail cars.
4. Makes over-the-shore landings.

CAPABILITIES AND FEATURES

1. Operates over rough terrain - including beaches, snow, mud and cross country.
2. Fords up to 60 inches (152 cm) of salt water.
3. Comes with a 20 ft. (6.1 m) tophandler and may also have a 35 ft (10.6 m) or 40 ft (12.2 m) tophandler.

4. Raises, lowers, tilts forward or backward, sideshifts or sidetilts a container load.
5. Lifts a load from 12 in. (30 cm) below ground level to 118 in. (300 cm) above ground level (measured to bottom of container).
6. Articulated (bends in center) for easy load handling.

EQUIPMENT WEIGHTS AND WEIGHTS AND CENTER OF GRAVITY

Total Weight: 105,120 lb. (47,700 kg)

Front Axle: 39,000 lb. (18,000 kg)

Front Section: 40,000 lb. (18,100 kg)

Rear Axle: 65,520 lb. (29,700 kg)

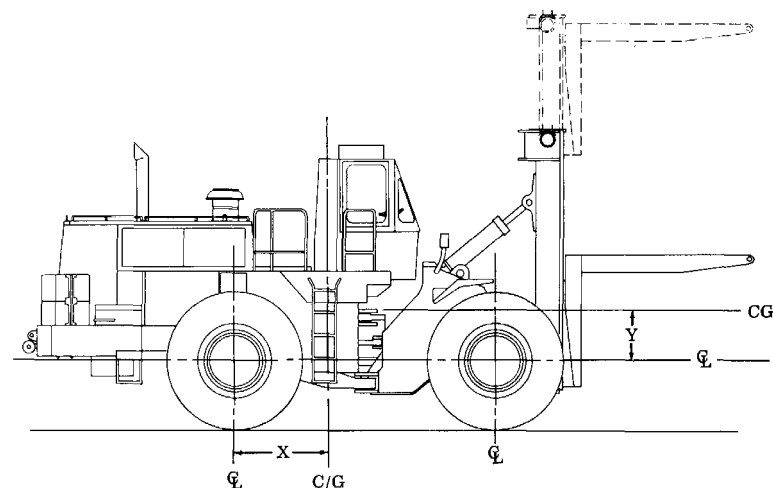
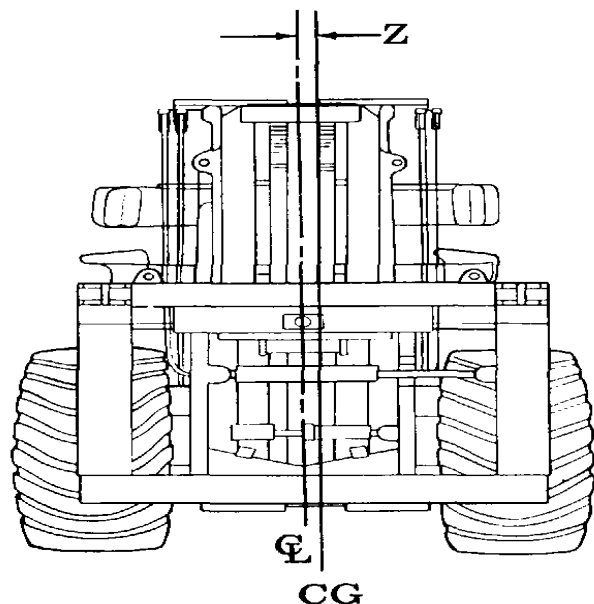
Rear Section: 65,000 lb. (29,000 kg)

Mast: 14,710 lb. (6670 Kg)

Fork: 5,920 lb. (2690 kg)

Counterweights

Rear: 16,000 lb. (7300 kg)



X = 55.94 in. (142 cm)

Y = 24.29 in. (61.7 cm)-- 59.13 in. (50.2 cm)
from groundline

Z = 0.197 in. (0.500 cm)

NOTE

Weight is with 70%
fuel in tanks, mast
vertical, with fork,
no tophandler