

OPERATOR'S MANUAL

FOR

CRUSHER, ROLL: DIESEL AND
ELECTRIC DRIVEN, WHEEL MOUNTED,
PNEUMATIC TIRES, 75 TON PER HOUR
EAGLE CRUSHER MODEL 5230B AND 5230C
(NSN 3820-00-788-5999)
EAGLE CRUSHER MODEL 5230D
(NSN 3820-00-876-7876)

COMPONENT OF

CRUSHING AND SCREENING
PLANT: DIESEL AND ELECTRIC DRIVEN,
WHEEL MOUNTED, 75 TON PER HOUR

This manual supersedes TM 5-3820-205-10-1, dated 24 January 1964, and all changes.

Approved for public release distribution is unlimited.

HEADQUARTERS, DEPARTMENT OF THE ARMY

TECHNICAL MANUAL

TM 5-3820-205-10-1

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington D.C., 30 September 1991

**OPERATORS MANUAL
FOR CRUSHER, ROLL: DIESEL AND
ELECTRIC DRIVEN, WHEEL MOUNTED,
PNEUMATIC TIRES, 75 TON PER HOUR
EAGLE CRUSHER MODEL 5230B AND 5230C
(NSN 3820-00-788-5999)
EAGLE CRUSHER MODEL 5230D
(NSN 3820-00-876-7876)**

**COMPONENT OF
CRUSHING AND SCREENING
PLANT: DIESEL AND ELECTRIC DRIVEN,
WHEEL MOUNTED 75 TON PER HOUR**

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.

TABLE OF CONTENTS

	Paragraph	Page
CHAPTER 1. INTRODUCTION		
Section I. General	1,2	1
II. Description and data	3-6	1
CHAPTER 2. INSTALLATION AND OPERATION INSTRUCTIONS		
Section I. Service upon receipt	7-10	7
II. Controls and instruments	11,12	17
III. Operation of equipment	13-22	22
IV. Operation of auxiliary materiel used in conjunction with the roll crusher	23-25	30

* This manual supersedes TM 5-3820-205-10-1, dated 24 January 1964, and all changes.

TABLE OF CONTENTS (Con't)

	Paragraph	Page
CHAPTER 3. MAINTENANCE INSTRUCTIONS		
Section I. Operator's tools and equipment	26,27	31
II. Lubrication.....	28,29	31
III. Operator/crew preventive maintenance checks and services (PMCS)	30-32	32
IV. Troubleshooting procedures	33-49	37
V. Field expedient repairs	50-53	40
VI. Fuel system	54-57	40
VII. Cooling system	58,59	43
VIII. Engine electrical system	60,61	44
IX. Airbrake system	62,63	46
X. Exhaust system	64,65	47
XI. Engine clutch assembly	66,67	47
XII. Roll crusher assembly	68,69	47
XIII. Vibrating screen assembly	70-72	48
XIV. Feeder assembly	73,74	51
XV. Rotary elevator assembly	75,76	52
XVI. Return (under) conveyor assembly	77,78	53
XVII. Main (feed) conveyor assembly	79,80	54
XVIII. Leveling jacks	81,82	55
CHAPTER 4. DEMOLITION OF THE ROLL CRUSHER TO PREVENT ENEMY USE	83-87	57
Appendix I. REFERENCES		61
II. BASIC ISSUE ITEMS LIST		63
Index		71

CHAPTER 1 INTRODUCTION

Section I. GENERAL

1. Scope

- a. These instructions provide information on the operation, lubrication, and preventive maintenance checks and services of the equipment, accessories, components, and attachments for the Eagle Roll Crusher Models 5230B, 5230C, and 5230D.
- b. Appendix I contains a list of publications applicable to this manual. Appendix II contains the basic issue items authorized for use by the operator. The maintenance allocation chart is located in TM 5-3820-205-20- 1.
- c. Numbers in parentheses on illustrations indicate quantity. Numbers preceding nomenclature callouts on illustrations indicate the preferred maintenance sequence.
- d. You can help improve this manual. If you find an mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter or DA Form 2028 (*Recommended Changes to Publications and, Blank Forms*) direct to: Commander, U.S. Army Tank Automotive Command, ATTN: AMSTA-MB, Warren, M 48397-5000. A reply will be furnished to you.

2. Maintenance, Forms, Records, and Reports

DA Forms and procedures used for equipment maintenance will be only those prescribed by DA Pam 738-750 *The Army Maintenance Management System(TAMMS)*.

Section II. DESCRIPTION AND DATA

3. Description

The Roll Eagle Crusher Models 5230B, 5230C, and 5230D (figs. 1 and 2) are portable, self-contained units used to crush and grade aggregate. A four cycle, six cylinder diesel engine operates the crusher roll assembly. Electric motors, driven by an extraneous power source, operate the vibrator screen assembly, return (under) conveyor, main (feed) conveyor, rotary elevator, and reciprocating feeder assembly. These components are described in appropriate sections of this manual.

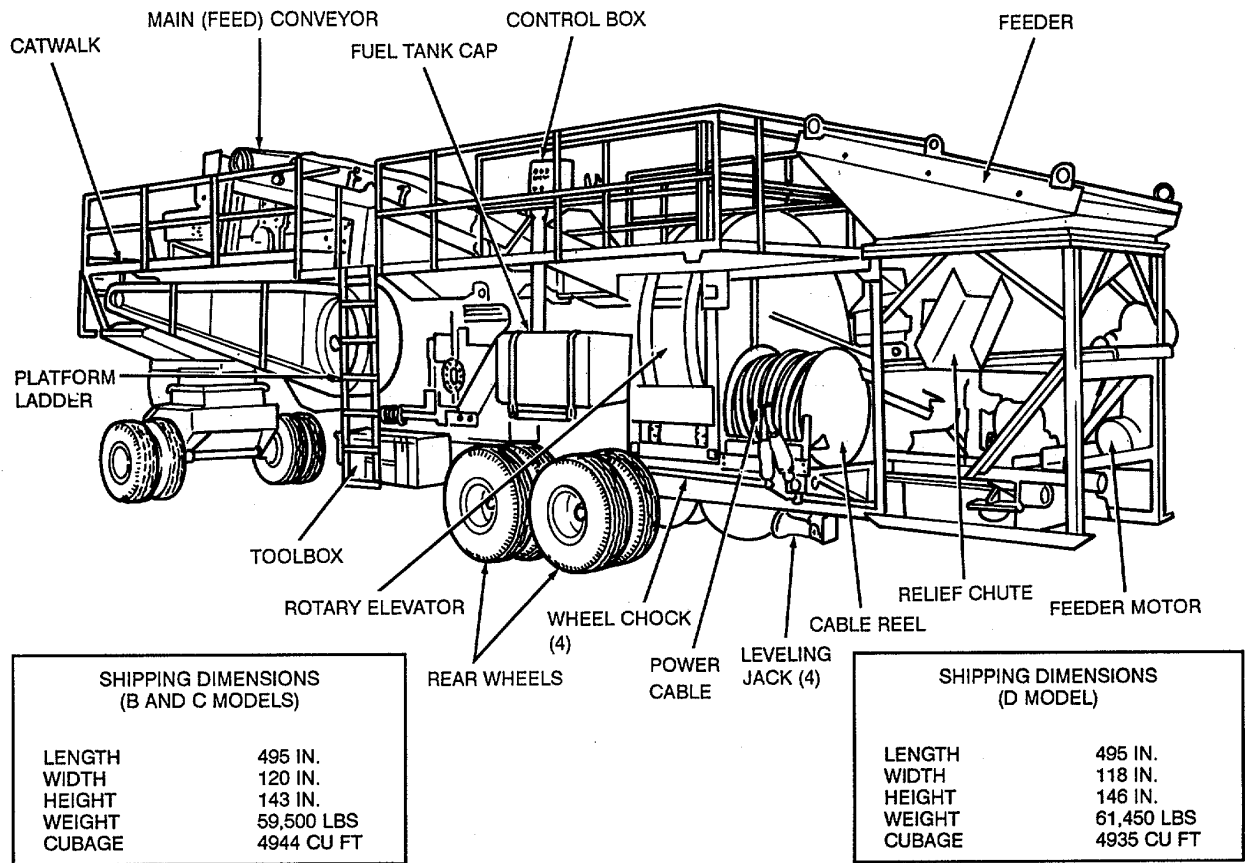


Figure 1. Roll crusher, left rear, three-quarter view (Model 523B, C).

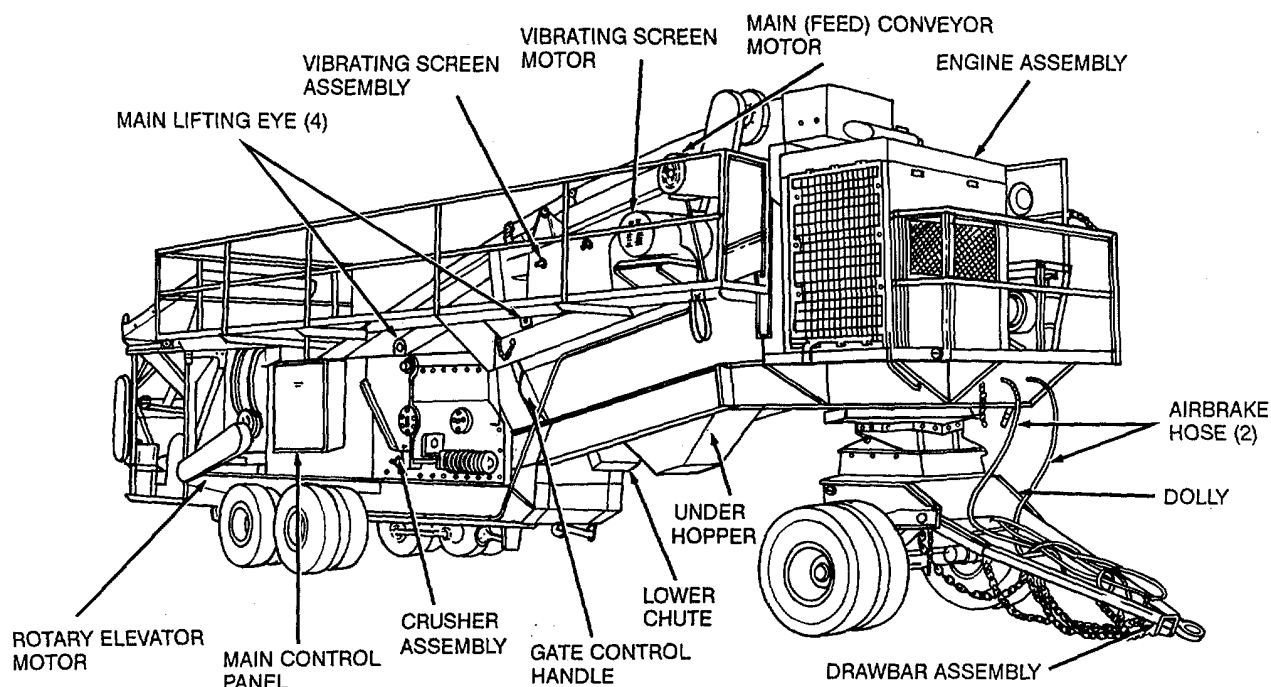


Figure 2. Roll crusher, right front, three-quarter view.

4. Aggregate Crushing and Screening Plant

The roll crushers shown on figures 1 and 2 may be a component of a crushing and screening plant. The plant must be set up on firm level ground and as near as possible to the source of material to be and positioned so the conveyors may expel the processed aggregate to the desired location for stock piling or hauling. Figure 3 illustrates a typical crushing and screening plant layout where the crusher may be utilized as a component. The positions of the various components may be changed as required. For example, only the final discharge conveyor is absolutely necessary for operation; the remaining three components indicated are illustrated only where the conveyors could be used at the operator's discretion. The power source can be either a generator set that will meet the requirements or powerline current. The direction of flow of the aggregate processed is also illustrated on figure 3.

5. Identification and Tabulated Data

a. *Identification.* The roll crusher has 15 major identification and instruction plates which are applicable to the operator.

- (1) *Corps of Engineers data plate.* Located on the left of the main frame of the trailer, below the vibrating screen assembly. Provides the National Stock Number, model number, and dimensions.
- (2) *Engine identification plate.* Located on the left side of the engine. Provides the manufacturer, model, and serial number.
- (3) *Power takeoff clutch identification and instruction data plate.* Located on top of the power takeoff housing at the rear of the engine. Provides the manufacturer, model, serial number, and operation, adjustment, and lubrication instructions.
- (4) *Transportation data plate.* Located on the left of the main frame of the trailer, below the vibrating screen assembly. Provides overall length, width, height, and center of gravity.
- (5) *Feeder, return (under) conveyor, and rotary elevator motor identification plates.* These plates are identical and are located on the motor housing. Provides manufacturer, model, horsepower, amps (amperes), volts, and rpm (revolutions per minute).
- (6) *Secondary trailer identification plate.* Located on the left of the main frame of the trailer. Provides the manufacturer and serial number.
- (7) *Dolly identification plate.* Located on the front of the dolly frame below the fifth wheel. Provides the manufacturer, model, and serial number.