

OPERATOR'S MANUAL

FOR

**CRUSHER, JAW: DIESEL AND
ELECTRIC DRIVEN, WHEEL MOUNTED,
PNEUMATIC TIRES, 75 TON PER HOUR
EAGLE CRUSHER MODEL 5157 AND 5157A
(NSN 3820-00-783-7311)
EAGLE CRUSHER MODEL 5157B
(NSN 3820-00-880-0540)**

COMPONENT OF

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

This manual supersedes TM 5-3820-205-10-2, dated 24 January 1964, and all changes.

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HEADQUARTERS, DEPARTMENT OF THE ARMY

TECHNICAL MANUAL
TM 5-3820-205-10-2

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

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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.

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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 Jaw Crusher Models 5157, 5157A, and 5157B.

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 5-3820-205-20-2.

c. Numbers in parentheses on illustrations indicate quantity. Numbers preceding nomenclature callouts indicate the preferred maintenance sequence.

d. 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 or DA Form 2028 (Recommended Changes to Publications and Blank Forms) direct to: Commander, U.S. Army Tank-Automotive Command, ATIN: AMSTA-MB, Warren, MI 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 Eagle Crusher Models 5157, 5157A, and 5157B (figs. 1 and 2) are diesel engine driven, movable jaw-type, primary crushing and screening units used in quarry rock operation or gravel pit operation in conjunction with other major units. It can also be used by itself to produce fill or base course jaw crusher run material. The jaw crusher is a self-contained unit with the exception that it must be supplied 220/440 volts from a power source to operate the motors that actuate the conveyors and scalper vibrating screen. During operation, the material to be crushed is fed into the pan feeder assembly (fig. 1), and is conveyed by the apron to the scalper vibrating screen assembly (fig. 2), where it is separated by the grizzly bars and a preselected screen. A two-level operator's platform provides access to the operator's control box and engine controls. The basic components are the engine, pan feeder assembly, scalper vibrating screen assembly, discharge conveyor, and the jaw crusher assembly.

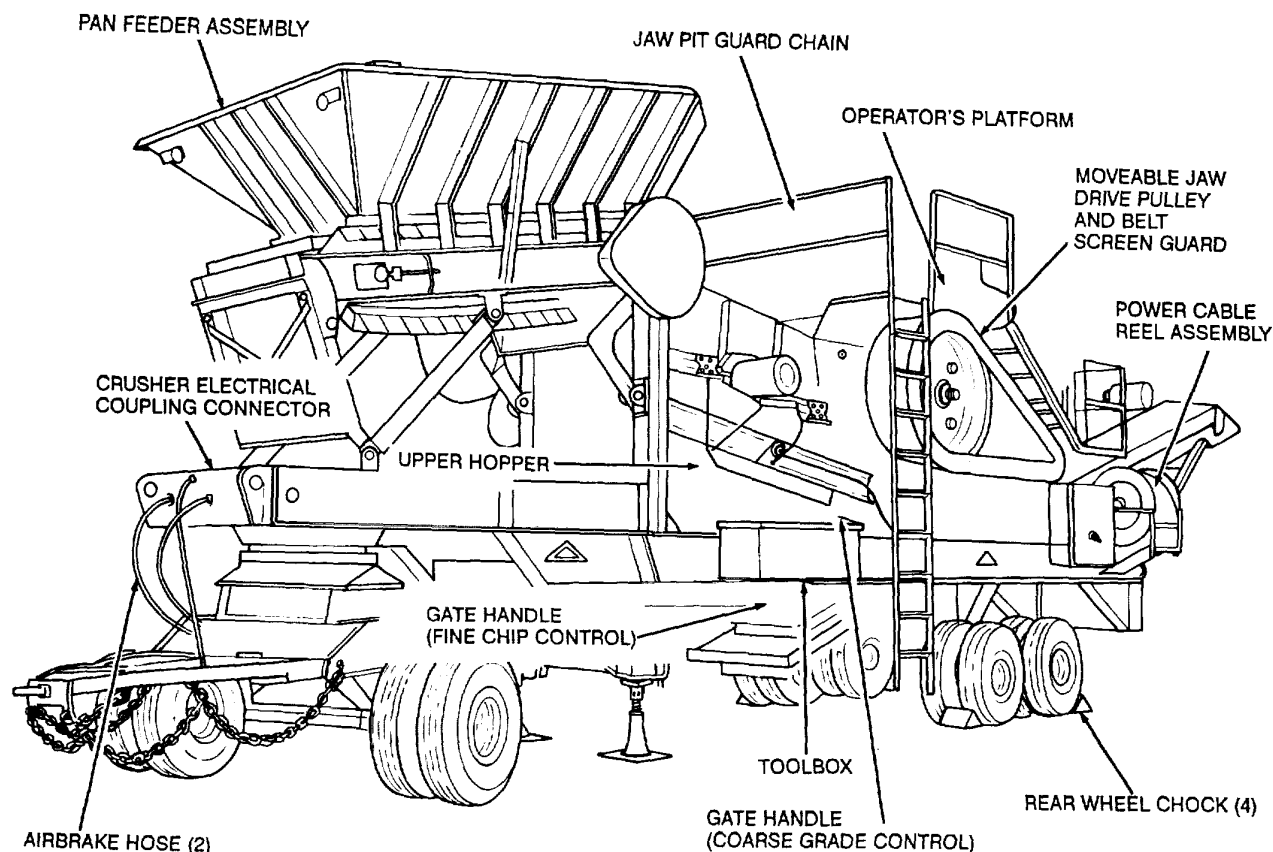


Figure 1. Jaw crusher, left front, three-quarter view.

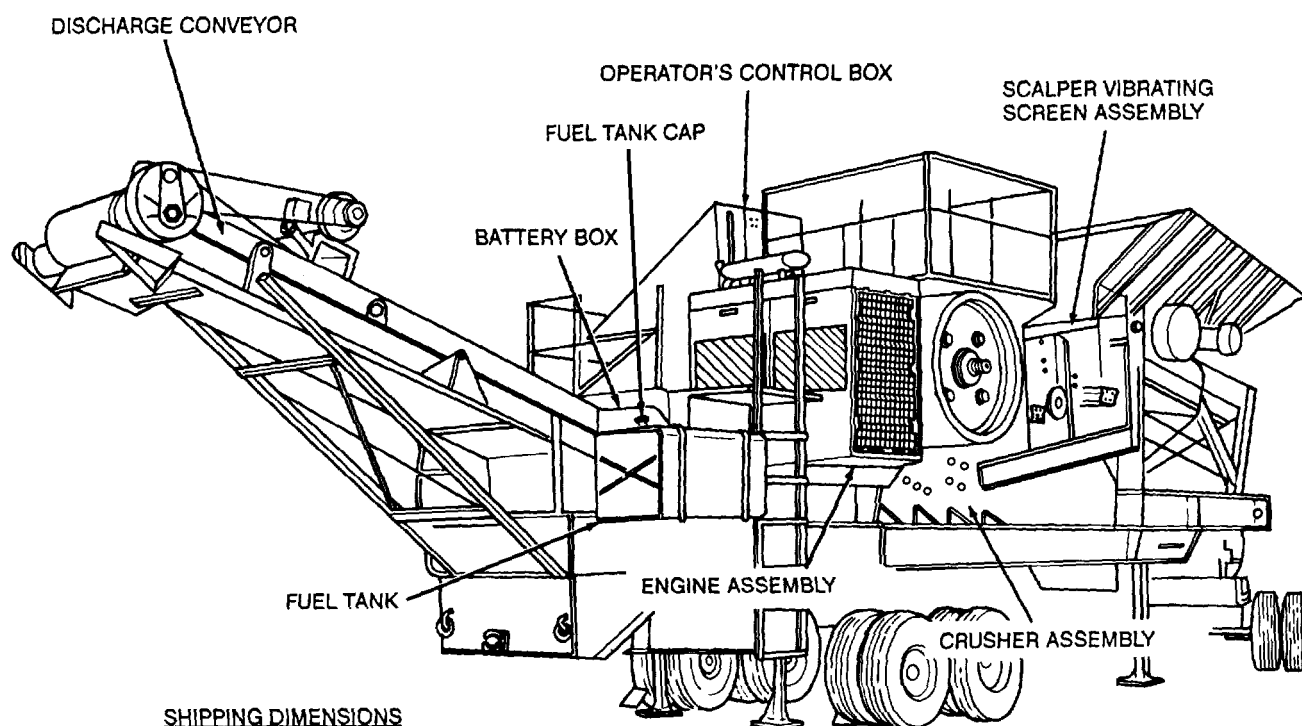
4. Aggregate Crushing and Screening Plant

The jaw crushers illustrated 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 processed and positioned so the conveyors may expel the processed aggregate to the desired location for stockpiling or hauling. Figure 3 illustrates a typical crushing and screening plant layout where the jaw 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 to operation; the remaining three components indicated are illustrated only where the conveyors could be used at the discretion of the operator and crew. 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 shown on figure 3.

5. Identification and Tabulated Data

a. Identification. The jaw crusher has 12 identification and instruction plates.

- (1) Corps of Engineers data plate. Located on the left front of the jaw crusher frame. Provides the description, serial number, manufacturer, model, and dimensions of the jaw crusher.
- (2) Engine identification plate. Located on the left side of the engine. Provides manufacturer, model, and serial number.
- (3) Transportation data plate. Located on the left front of the jaw crusher frame. Provides center of gravity, bogie weight, and axle weight.
- (4) Power take off 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, operation, adjustment, and lubrication instructions.

**SHIPPING DIMENSIONS**

	MODEL 5157/5157A	MODEL 5157B
OVERALL LENGTH	489 IN.	483 IN.
OVERALL HEIGHT	144 IN.	143 IN.
OVERALL WIDTH	108 IN.	106 IN.
OVERALL WEIGHT	71,400 LB.	72,200 LB.
CUBAGE	4428 CU FT	4290 CU FT
WHEEL BASE	284 IN.	275 ½ IN.

Figure 2. Jaw crusher, right rear, three-quarter view and shipping dimensions.

- (5) Main electrical control panel identification and instruction data plate. Located on the upper left corner of the panel inside the main electrical control box. Provides manufacturer, line volts, phase, cycle, control volts, and connection diagram number.
- (6) Trailer identification plate. Located on the left front of the trailer frame. Provides information on manufacturer, model, and serial number.
- (7) Dolly identification plate. Located on the front of the dolly frame. Provides the manufacturer, model, and serial number.
- (8) Ground rod caution plate. Located on the main electrical control panel box. Provides a caution note regarding suitable grounding.
- (9) Scalper vibrating screen assembly identification plate. Located on the right side of the scalper vibrating screen assembly. Provides manufacturer, model, serial number, speed, lubrication, and operating instructions.
- (10) Pan feeder reducer gearbox identification and data plate. Located on the reducer gearbox. Provides manufacturer, model, class, ratio and lubrication instructions.
- (11) Main discharge conveyor reducer gearbox identification and data plate. Located on the reducer gearbox. Provides information on manufacturer, model, class, ratio, and lubrication.
- (12) Electric motors identification and data plates. Located on the tops of the electric motors. Provides the manufacturer, model, serial number, horsepower, voltage, and amperes.