

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

OPERATOR AND ORGANIZATIONAL
MAINTENANCE MANUAL
CRUSHER, JAW, DIESEL ENGINE DRIVEN,
SEMITRAILER MOUNTED, 35 TON PER HOUR CAPACITY
(IOWA MANUFACTURING COMPANY MODEL 2A-2A1
FSN 3820-851-6728
COMPONENT OF CRUSHING AND SCREENING PLANT
DIESEL ENGINE DRIVEN
FSN 3820-878-4285

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CRUSHER, JAW, DIESEL ENGINE DRIVEN, SEMITRAILER MOUNTED, 35 TON PER HOUR CAPACITY (IOWA MANUFACTURING COMPANY MODEL 2A-2A) FSN 3820-851-6728 COMPONENT OF CRUSHING AND SCREENING PLANT DIESEL ENGINE DRIVEN FSN 3820-878-4285

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CHAPTER 1 INTRODUCTION

Section I. GENERAL

1-1. Scope

a. These instructions are published for the use of the personnel to whom the primary crusher jaw unit is issued. They provide information on the operation and organizational maintenance of the equipment. Also included are descriptions of main units and their functions in relationship to other components.

b. Refer to TM 740-90-1 (Administrative Storage of Equipment), for information and instructions pertaining to organizational administrative storage.

c. Refer to TM 750-244-3 (Procedures for Destruction of Equipment to Prevent Enemy Use), for information and instructions on destruction of equipment to prevent enemy use.

d. Report errors, omissions, and recommendations for improving this publication by the individual user in encouraged. Reports should be submitted on DA Form

2028 (Recommended Changes to Publications) and forwarded direct to Commanding General, U.S. Army Mobility Equipment Command, ATTN: AMSME-MPP, 4300 Goodfellow Boulevard, St. Louis Mo. 63120.

e. Report all equipment improvement recommendations as prescribed by TM 38-750.

1-2. Record and Report Forms

a. DA Form 2258 (Depreservation Guide for Engineer Equipment).

b. For other record and report forms applicable to operator, crew and organizational maintenance, refer to TM 38-70.

II. DESCRIPTION AND DATA

1-3. Description

a. The model 2A-2A jaw crusher plant coupled with the crushing and screening plant provides a complete self contained and highly mobile crushing and screening unit capable of producing material under the most severe conditions.

b. The plant is used for the production of crushed rock and gravel to surface, maintain and repair military roads.

c. The unit consists of a feeder hopper, reciprocating feeder, jaw crusher, delivery conveyor and a diesel power unit.

d. The unit is trailer mounted using 16.5 x 22.5, 16 ply tires with air controlled brakes on all wheels. The rear wheels are mounted on tandem oscillating beams with a ridged main axle. The jaw crusher is provided with a removable dolly, furnished with safety marker lamps, both service and blackout, and reflectors. The dolly is fitted with coupling sockets and connecting cable to receive electric current for the lamps from the prime mover. Clutches for the plant are controlled by the operator from the walkway. In this manual right and left will vary. Right and left on the jaw crusher will be determined by facing the adjusting spring and on conveyors by facing the direction of material flow. To

determine the right and left side of the plant, stand at rear of unit looking forward.

1-4. Difference Between Models

The manual covers only the Iowa Manufacturing Co. Model 2A-2A jaw crusher. No known unit differences exist for the model covered by this manual.

1-5. Identification and Data

a. *Identification.* The primary jaw crusher plant has 4 major identification plates. The location of these plates are listed in table 1-1.

Table 1-1. Information Plates

Item	Description	Location
1	Plate, identification	Frame, right side
2	Plate, tie down data	Frame, Right side
3	Plate, warning (feeder)	feeder, frame, left side
4	Plate, battery cable hookup	Frame, right side

b. Tabulated Data.

(1) *Portable jaw crusher.*

Manufacturer Iowa Manufacturing Co.
Model..... 2A-2A
Serial No..... 28334A through 28346A
Capacity..... 35 TPH @ 80% Crush-i 1/2"
Minus Material

Engine Speed for Plant..... 1800 RPM

(2) *Jaw crusher accessories.*

(a) *Jaw crushers.*

Size 15" x 24"
Model..... 1524
Type Overhead Eccentric

(b) Feeder.

Model..... 20"
Type Reciprocating Plate

(c) *Delivering conveyor.*

Type Belt
Width (belt) 24"
Length..... 230"

(3) *Engine.*

Manufacturer	Detroit Diesel
Type	4 cylinder
Model	71
Bore	4 1/4 in.
Stroke	5 in.
Fuel	Diesel Fuel Oil
Piston Displacement.....	284
Specification Number	4031-C
Compression	17 to 1

(4) *Engine accessories.*

(a) Fuel strainer.

Manufacturer AC Spark Plug
Model 5574961

(b) Fuel pump.

Manufacturer Detroit Diesel
Model..... 5184532

(c) *Engine speed governor.*

Manufacturer Woodward
Model SGXA

(d) Starter motor.

Manufacturer Delco Remy
Model 1113862

(e) Oil cooler.

Manufacturer Detroit Diesel
Model A-L

(f) Oil filter.

Manufacturer AC Spark Plug
Model 5573014

(g) Air cleaner.

Manufacturer Farr Company
Model Roto Pamic

(h) *Water pump.*

Manufacturer Detroit Diesel
Model 5186576

(i) *Tachometer.*

Manufacturer AC Spark Plug
Model 1536865

(j) *Voltage regulator.*

Manufacturer Delco Remy
Model 1118558

(k) *Generator.*

Manufacturer Delco Remy
Model 1117478

(5) *Capacities.*

Radiator.....	6 3/4 gal.
Fuel Tank.....	70 gal.
Engine Crankcase	15 quarts
Air Cleaner	Dry Type Element
Oil Filters	4 quarts
Tire Pressure	65 psi

(6) *Nut and bolt torque data.*

Cylinder Head Bolts and Nuts 175-185 lb-ft
Air Inlet Housing to Blower.. 16-20 lb-ft

(7) *Adjustment data.*

Valve (Engine Cold)
Exhaust 012

(8) *Dimensions and weights.*

(c) Dimensions and Weight:

Length	373"
Width	102"
Height	126"
Weight	45,000 lbs.
Volume	2,780 cu. ft.

(9) Wiring diagram. See figure 1-3.

(10) *Maintenance and operating supplies.* Refer to appendix C for a complete list of maintenance and operating supplies required for initial operation.