DEPARTMENT OF THE ARMY TECHNICAL MANUAL

DIRECT SUPPORT, GENERAL SUPPORT, AND DEPOT MAINTENANCE MANUAL

CRUSHER, SCREENING UNIT, DIESEL ENGINE DRIVEN, SEMITRAILER MOUNTED, 35 TON PER HOUR CAPACITY (IOWA MANUFACTURING COMPANY MODEL 2A-2B) FSN 3820-938-7942, COMPONENT OF CRUSHING AND SCREENING PLANT, DIESEL ENGINE DRIVEN FSN 3820-878-4285

HEADQUARTERS, DEPART MENT OF THE ARMY

25 JUNE 1968

TECHNICAL MANUAL

NO. 5-3820-233-35/2

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D. C., *25 June 1968*

Direct Support, General Support and Depot Maintenance Manual

CRUSHER, SCREENING UNIT, DIESEL ENGINE DRIVEN SEMTRAILER MOUNTED, 35 TON PER HOUR CAPACITY (IOWA MANUFACTURING COMPANY MODEL 2A-2B) FSN 3820-938-7942, COMPONENT OF CRUSHING AND SCREENING PLANT, DIESEL ENGINE DRIVEN FSN 3820-878-4285

			Paragraph	Page
CHAPTER	1.	INTRODUCTION		
Section	I.	General	1, 2	1-1
	II.	Description and data	3, 4	1-1
CHAPTER	2.	GENERAL MAINTENANCE INSTRUCTIONS		
Section	I.	Special tools and equipment	5-7	2-1, 2-2
	II.	Troubleshooting	8-22	2-2, 2-4
	III.	Removal and installation of major components	23-28	2-4, 2-9
CHAPTER	3.	ENGINE REPAIR INSTRUCTIONS		
Section	I.	Engine accessories	29-38	3-1, 3-23
	II.	Engine components	39-54	3-23, 3-46
CHAPTER	4.	RUSHING AND SCREENINGS PLANT REPAIR INSTRUCTIONS		
Section	I.	Rock and sand conveyors	55, 56	4-1
	II.	Overhead conveyor	57	4-5
	III.	Rock and sand conveyor drives	58-61	4-8, 4-11
	IV.	Overhead conveyor drive	62, 63	4-18
	V.	Elevating wheel assembly	64, 65	4-20
	VI.	Vibrating screen and vibrator unit	66-68	4-25, 4-26
	VII.	Screen drive countershaft	69, 70	4-36
	VIII.	Roll crusher	71, 72	4-38, 4-39
	IX	Undercrusher conveyor	73, 74	4-55
	X.	Undercrusher conveyor and elevating wheel drive	75, 76	4-58
	XI.	Main countershaft	77, 78	4-64
APPENDIX A. REFERENCES				A-1

CHAPTER 1

INTRODUCTION

Section I. GENERAL

1. Scope

a. These instructions are published for the use of direct and general support and depot maintenance personnel maintaining the Iowa Manufacturing Model 2A-2B Portable Secondary Crushing and Screening Plant. They provide information on the maintenance of the equipment which is beyond the scope of the tools, equipment, personnel, or supplies normally available to using organizations.

b. Report of errors, omissions, and recommendations for improving this publication by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to DA Publications) and forwarded direct to the Commanding General, U. S. Army Mobility Equipment Command, ATTN: AMSME-MPP, 4300 Goodfellow Boulevard, St. Louis, Missouri 63120.

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

2. Record and Report Forms

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

b. For other record and report forms applicable to direct and general support and depot maintenance, refer to TM 38-750.

Note.

Applicable forms, excluding standard Form 46 (United States Government Motor Vehicles Operator's Identification Card) which is carried by the operator, shall be kept it in a canvas bag mounted on the equipment.

Section II. DESCRIPTION AND DATA

3. Description

A general description of the Portable Secondary Crushing and Screening Plant, the location and description of the identification and instruction plates, and information on the differences in models are contained in the Operator and Organizational Maintenance Manual. The repair and maintenance instructions are described in appropriate sections of this manual.

4. Tabulated Data

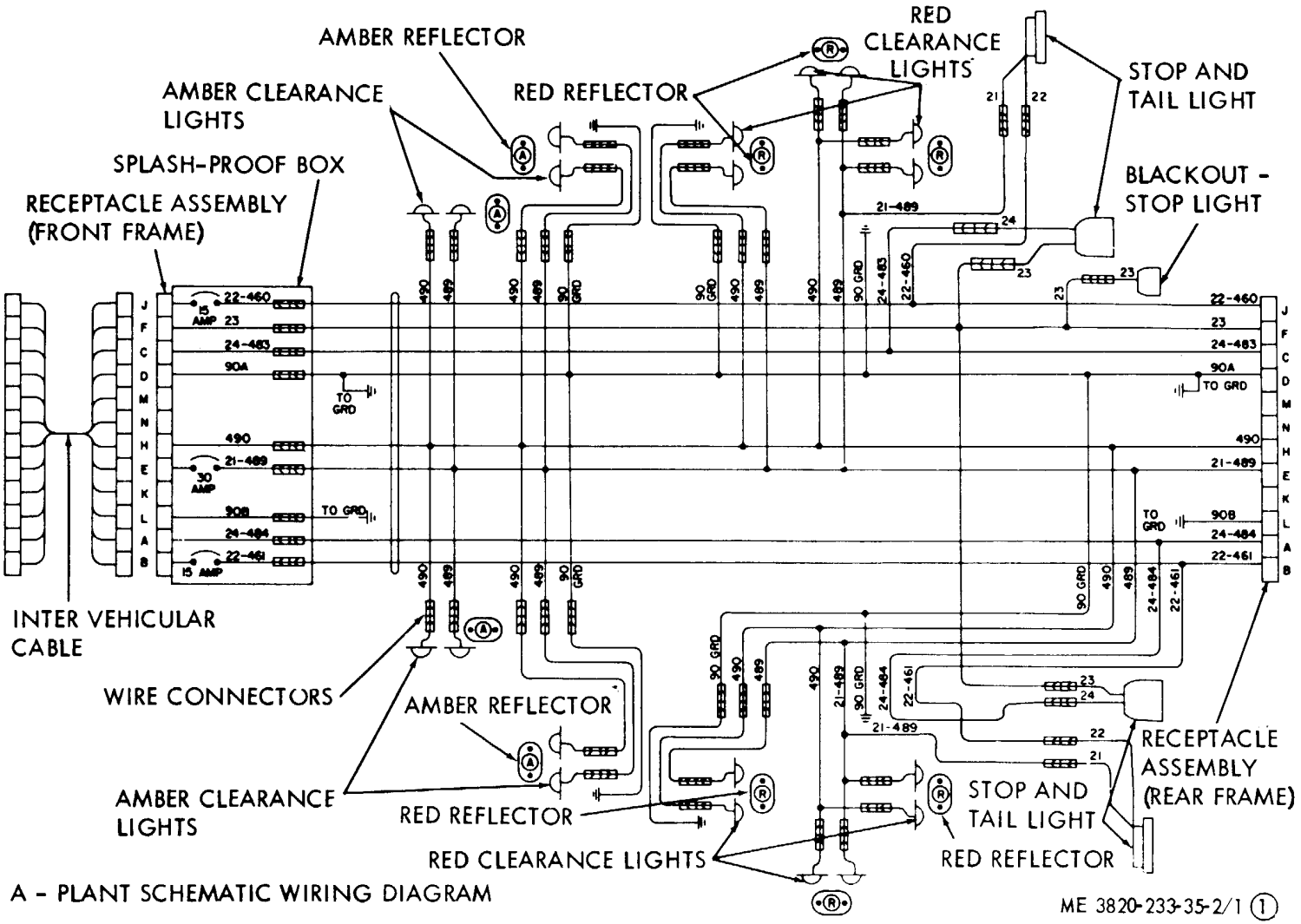
a. General. This paragraph contains all the overhaul data pertinent to direct and general support and depot maintenance personnel. A wiring diagram (fig. 1) is also included.

b. Capacity of Plant.

Rating	35 tons per hour of 1 1/2" material @ 80% crushed (Based on material weight of 100 lbs. per cubic foot)

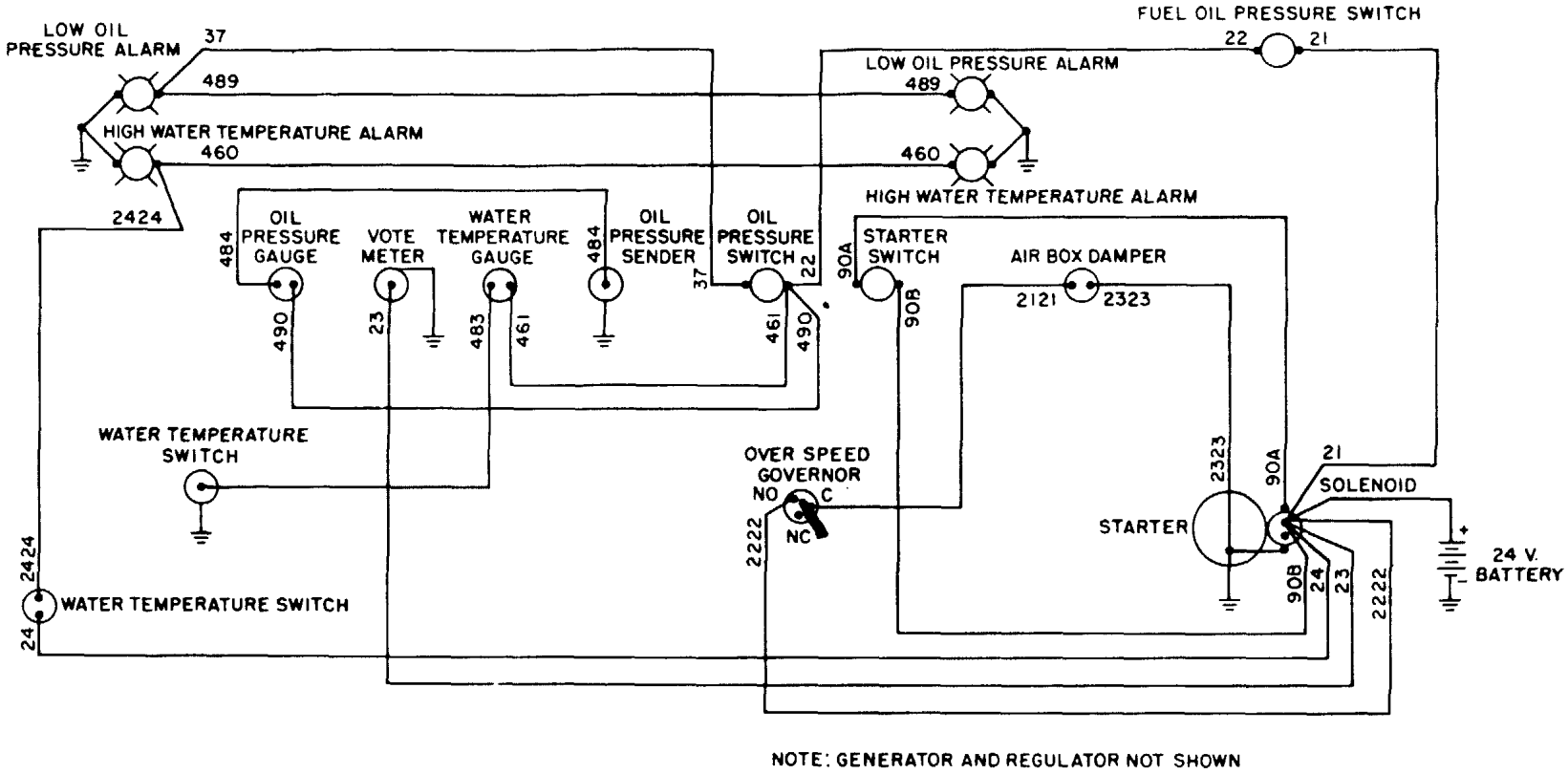
c. Engine

Manufacturer	General Motors
Model	4031C
Series	71
Number of cylinders	4
Displacement	284 cubic inches
Bore	4 1/4 inches
Stroke	5 inches
Compression ratio	17 to 1
Firing order	1-3-4-2
Number of main bearings.	5



A - PLANT SCHEMATIC WIRING DIAGRAM

Figure 1 (1). Schematic wiring diagram.



3 - POWER UNIT SCHEMATIC WIRING DIAGRAM.

ME 3820-233-35-2/1 (2)

Figure 1 (2). Continued.

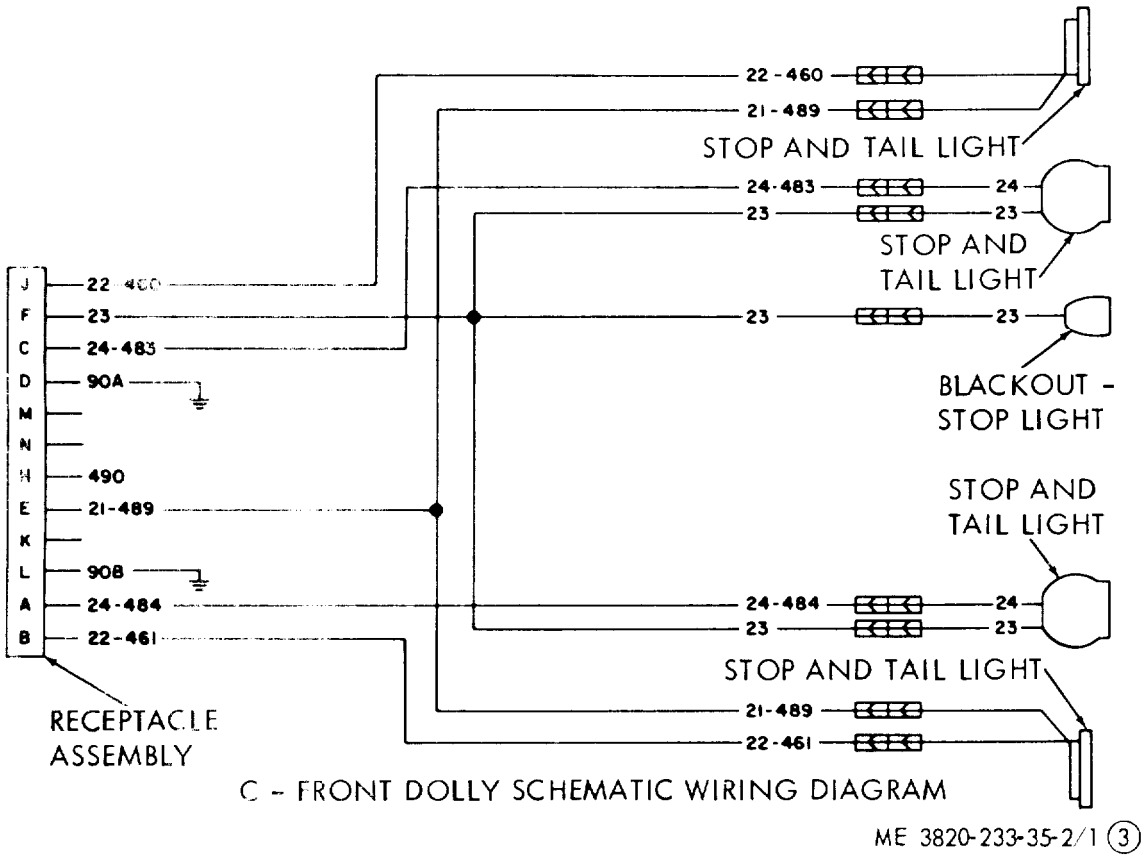


Figure 1 (3)-Continued.