

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

OPERATOR'S MANUAL
CLEANING MACHINE
FUEL CAN AND DRUM
(BARNES MODELS
4310CA AND 15801CA)

This reprint includes all changes in effect at the time of
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**CLEANING MACHINE, FUEL CAN, AND DRUM
(BARNES MODELS 4310CA AND 15801CA)**

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***This manual supersedes applicable portions of TM 10-1140, 24 June 1952.**

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CHAPTER 1

INTRODUCTION

Section I. GENERAL

1. Scope

This manual is published for personnel responsible for operating the Cleaning Machine, Fuel Can, and Drum, and performing first echelon maintenance. This equipment hereafter will be referred to as the cleaning machine. This manual includes a description of the equipment and an explanation of its functions. Information relating to the 50-gallon-per-minute dispenser, a major component of the cleaning machine, is limited, since it is discussed and fully explained in TM 10-1125. Repair parts for the dispenser are listed in TM 10-4320-20220P and TM 10-4320-20235P. The maintenance allocation chart is published in TM 104940-201-20.

2. Appendixes

Appendix I contains references pertaining to the cleaning machine. Appendix II, Basic Issue Items List, includes the items required for stockage by first echelon maintenance units.

3. Maintenance Forms and Records

DD Form 110, Vehicle and Equipment Operational Record, is to be used by the operator in performing the services listed on the reverse side of the form and is the operator's authority for operating the equipment.

4. Orientation

a. *General.* Information within this publication relates to two models of the cleaning machine, Barnes Model 4310CA and Barnes Model 15801CA. Since the two models differ slightly in design only, separate operating instructions are not required. Parts of each model of the cleaning machine are used in illustrations throughout the manual and are so identified in the figure captions where appropriate. Variations in the design of the two models will be explained throughout the manual where necessary.

b. *Terms.*

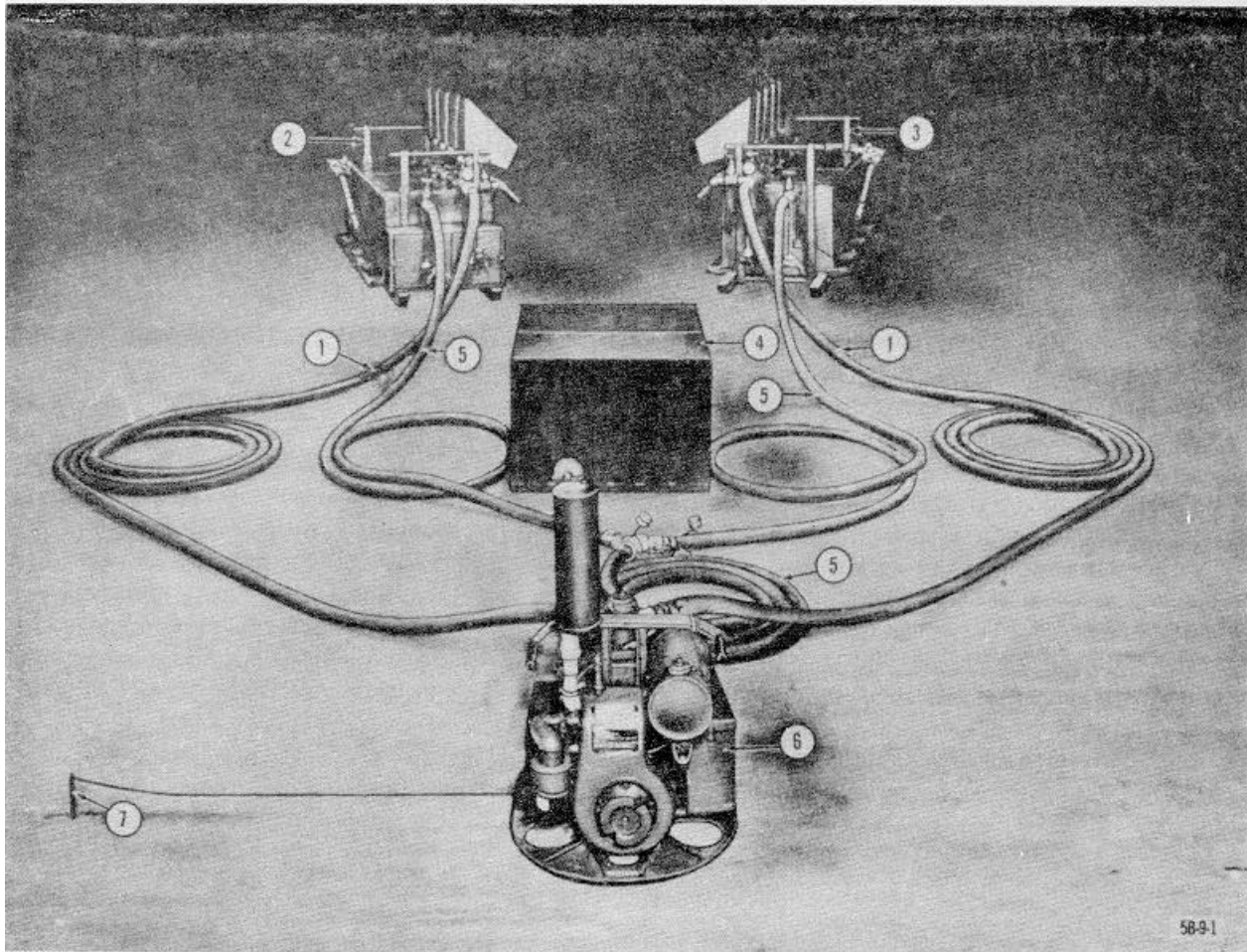
- (1) *Front.* Front is that end of the cleaner assembly to which the controlling gate valves and pressure gage are attached.
- (2) *Fill side.* Fill side is that side of the cleaner assembly where the hatches for filling the sedimentation tank are located.
- (3) *Operating side.* The operating side is that side of the cleaner assembly where the cradles, used by the operator during the can-washing operations, are mounted.
- (4) *Rear.* Rear is that end of the cleaner assembly to which the fire extinguisher and the hose compartment for the 55gallon drum washer are attached.

Section II. DESCRIPTION AND DATA

5. General

The cleaning machine (fig. 1) is designed to remove sand, dirt, loose rust, and sediment from the interior of the 5-gallon can and the 55-gallon drum by the spraying action of cleaning solvent delivered under pressure into the interior of the container. The

equipment consists primarily of two cleaner assemblies, one 50gallon-per-minute dispenser, three 25-foot lengths of 1 1/2-inch suction hose, and two 50-foot lengths of 1 1/2-inch discharge hose. Although Stoddard solvent is the cleaning agent normally used, kerosene may be used in an emergency.



- | | |
|----------------------------------|----------------------------------|
| 1 Discharge hose | 5 Suction hose |
| 2 Right-hand cleaner assembly | 6 50-gallon-per-minute dispenser |
| 3 Left-hand cleaner assembly | 7 Ground rod |
| 4 Hose and dispenser compartment | |

Figure 1. Assembled can and drum-cleaning equipment (Model 15801CA).

6. Dispenser

The 50-gallon-per-minute dispenser circulates the cleaning solvent from tank to tank through the suction and discharge hose and exerts sufficient pressure upon the solvent to flush the containers effectively. Operating and maintenance instructions are contained in TM 10-1125.

7. Cleaner Assemblies

Each cleaner assembly (figs. 1 through 4) consists of a sedimentation tank (fig. 2) with filters, five cradles and cradle valves (figs. 2 and 3), a suction system and a pressure system, gate valves to direct the flow of cleaning solvent (5, 7, and 8, fig. 3), and a drum-washer assembly (fig. 3). Each assembly is mounted in a frame and is equipped with a fire extinguisher and hose compartment (fig. 4) for housing the discharge

hose of the drum-washer assembly. Included in the serial number on each assembly is the letter R or L, which indicates right- or left-hand cleaner assembly. The assemblies may also be identified as right or left by the location of the cradles. When one looks from the front of the assemblies toward the rear, the cradles for the right-hand assembly are to the right and those for the left-hand assembly are to the left (fig. 1). The two assemblies are identical except for the location of the cradles and the attachment of a toolbox to the right-hand assembly.

8. Sedimentation Tanks

The sedimentation tank (fig. 2) of each cleaner assembly is constructed of aluminum. The tank serves as a reservoir for the cleaning