

TECHNICAL MANUAL

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OPERATORS. ORGANIZATIONAL, DIRECT SUPPORT, GENERAL SUPPORT.

AND DEPOT MAINTENANCE MANUAL

MECHANISM, VALVE REPLACEMENT, M1

(END ITEM CODE 643)

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*This manual supersedes so much of TM 3-255, 16 September 1955, as pertains to the M1 valve replacement mechanism.

This reprint includes all changes in effect at the time of publication; change 1

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SECTION I

GENERAL

1. Scope

This manual is published for the use of personnel responsible for operator's, organizational, direct support, general support, and depot maintenance of the M1 valve replacement mechanism. It contains information on the repair, replacement, and overhaul of major units as well as detailed lubrication, cleaning, and painting information applicable to each level of maintenance, as authorized in the maintenance allocation chart.

2. Appendixes

Appendix I contains a list of current references. Appendix II contains the maintenance allocation chart. Appendix III contains a basic issue item list.

3. Record and Report Forms

- a. Use the appropriate forms prescribed in TM 38-750.
- b. The direct reporting by the individual user of errors, omissions, and recommendations for improving

this manual is authorized and encouraged. DA Form 2028 will be used for reporting these improvements. This form will be completed in triplicate using pencil, pen, or typewriter. The original and one copy will be forwarded direct to Commanding General, U.S. Army Edgewood Arsenal, ATTN: SMUEA-EISEM-EP, Edgewood Arsenal, Md., 21010. One information copy will be provided to the individual's immediate supervisor (e.g., officer, noncommissioned officer, supervisor, etc.).

- c. Use DD Form 6 to report damaged or improper shipment of materiel.

4. Allocation of Maintenance

Refer to the maintenance allocation chart (app. II) to determine maintenance services authorized for organizational maintenance personnel. Report any maintenance beyond the scope of organizational maintenance to direct support maintenance personnel.

SECTION II

USE AND DESCRIPTION

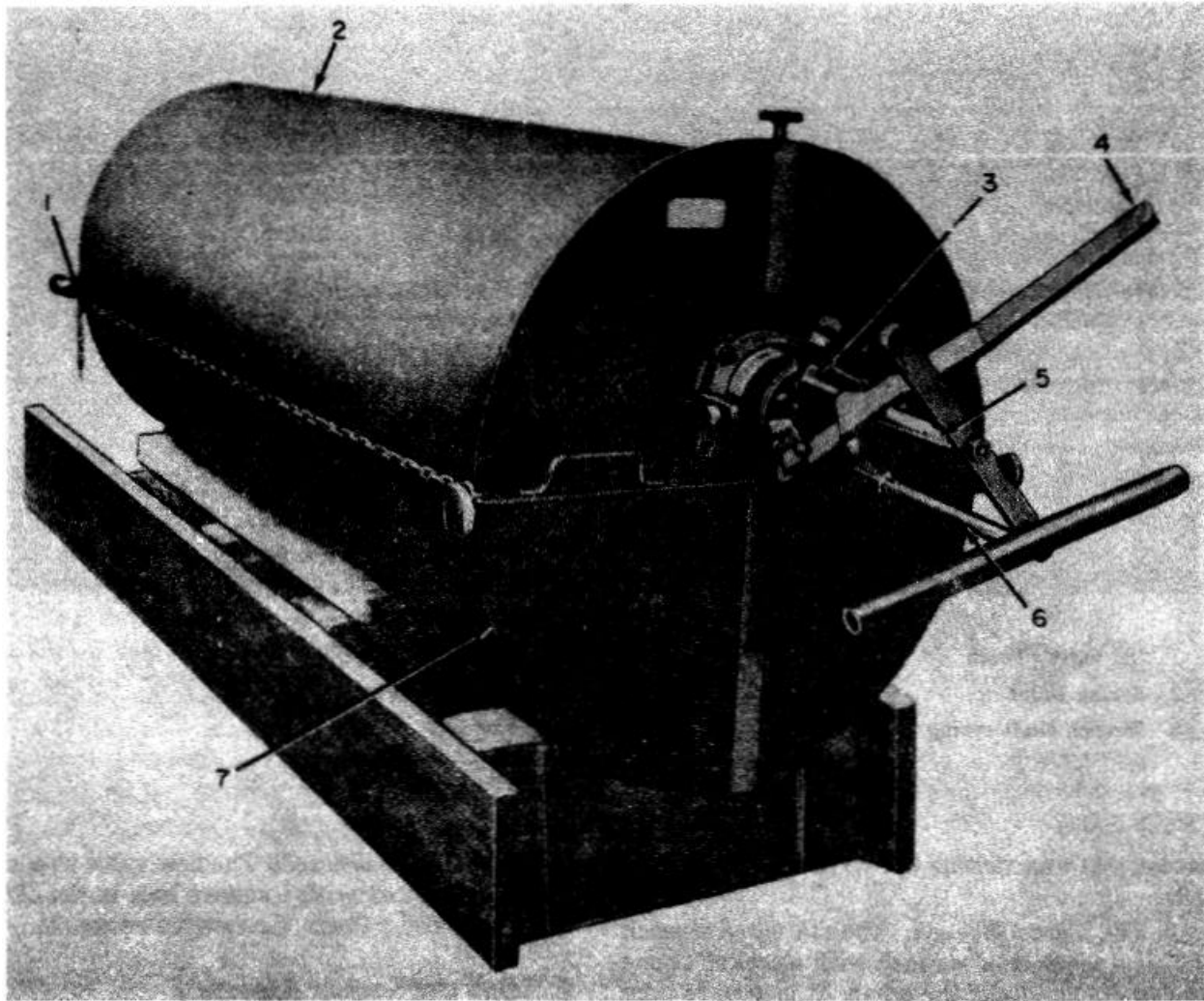
5. Use

The M1 valve replacement mechanism is used to remove faulty Chlorine Institute valves from type A and type D one-ton containers, and to replace them with new Chlorine Institute valves. With this mechanism, a well trained two-man crew can remove a faulty valve from a one-ton container and insert a new valve against internal pressure in the container in 10 seconds.

6. Overall Description

The M1 valve replacement mechanism (fig. 1) consists of two old valve socket wrench assemblies (6), two new valve socket wrench assemblies (5), a ball and

socket assembly (3), a valve socket lever assembly (4), a shield assembly (7), an adjustable chain coupling assembly (1), and a container gage assembly. One old valve socket and one new valve socket supplied with the mechanism are no longer used. They fit a Mark II liberty valve which is obsolete. The other old valve socket and new valve socket fit either a 3/4-inch or a one-inch Chlorine Institute valve. The socket wrench assemblies are held in operating position by the ball and socket assembly which is mounted in a hole in the shield assembly. The adjustable chain coupling assembly fastens the valve replacement mechanism to the front of a one-ton container. The container gage assembly is used to determine whether the valve replacement mechanism will fit the one-ton container.



- 1 Adjustable chain coupling assembly.
- 2 One-ton container
- 3 Ball and socket assembly

7 Shield assembly

- 4 Valve socket lever assembly
- 5 New valve socket wrench assembly
- 6 Old valve socket wrench assembly

Figure 1. M1 valve replacement mechanism in operating position.

7. Old Valve Socket Wrench Assembly

The old valve socket wrench assembly (fig. 2) consists of an old valve socket (4), a socket cap (6), a wrench shaft spring (8), a spring collar (2), and an old valve wrench (1).

a. Old Valve Socket. The old valve socket (4) is shaped at one end to fit the valve on a one-ton container. The other end is square in cross section to fit the socket on the old valve wrench. Immediately below the square end of the old valve socket are threads to

which the spring collar (2) is screwed. The socket cap (6) is screwed to the old valve socket and holds the valve in the socket.

b. Wrench Shaft Spring. The wrench shaft spring (3) is a coil spring which forces the old valve socket away from the front of the one-ton container after the old valve is unscrewed.

c. Spring Collar. The spring collar (2) screws to the threads on the end of the old valve