

TECHNICAL MANUAL

OPERATOR'S AND ORGANIZATIONAL

MAINTENANCE MANUAL

SHELTER SYSTEM, COLLECTIVE PROTECTION,

CHEMICAL-BIOLOGICAL: INFLATABLE,

TRAILER-TRANSPORTED, M51

NSN 4240-00-854-4144

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H E A D Q U A R T E R S , D E P A R T M E N T O F T H E A R M Y

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CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. Scope

These instructions are for use by the crew, operator, and organizational maintenance personnel. They apply to the M51 trailer-transported inflatable chemical-biological collective protection shelter system, hereinafter, referred to as the shelter system. The instructions contain information on the erection, operation, and maintenance of the equipment, as well as a description of the major systems and components and their functions in relation to other systems and components of the equipment.

1-2. Record and Report Forms

a. Equipment maintenance forms and procedures for their use are prescribed in TM 38-750.

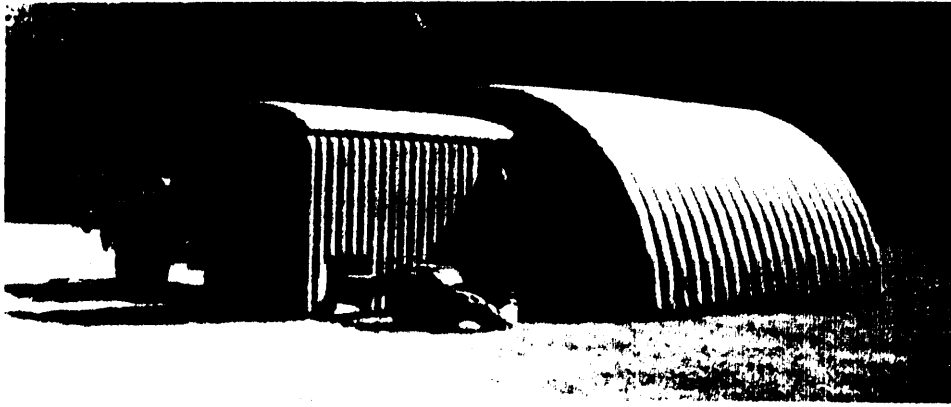
b. You can improve this manual by recommending changes using DA Form 2028 (Recommended Changes to Publications and Blank Forms) or DA Form 2028-2 (Test) (Recommended Changes to Equipment Technical Manuals), located in the back of this manual. Mail the form direct to Commander, US Army Armament Materiel Readiness Command, ATTN: DRSAR-MAS-C, Aberdeen Proving Ground, MD 21010. A reply will be furnished to you.

Section II. DESCRIPTION DATA

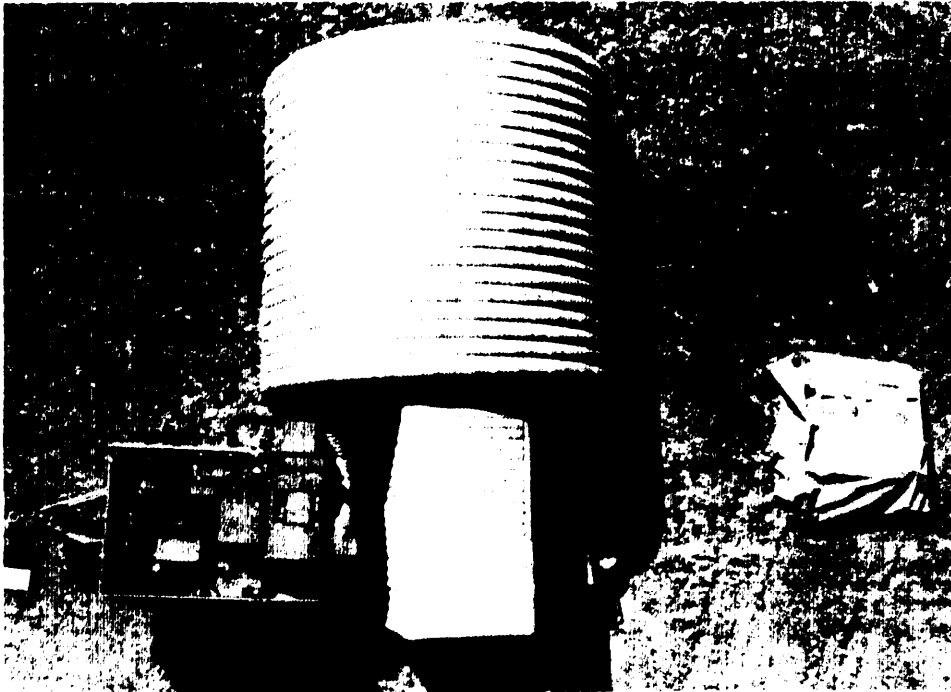
1-3. General

The shelter system (fig. 1-1) is a self-contained unit, designed to provide collective protection for 10 occupants against all known chemical-biological (CB) agents. It normally is deployed whenever a CB attack is anticipated or imminent. Using alternate erection procedures, it can be deployed during or immediately after a CB attack (contaminated environment). The shelter system can be stored or used in most climates and erected on most terrains. In normal weather, four men and a crew chief can remove the shelter system from the trailer and erect it in approximately 30 minutes.

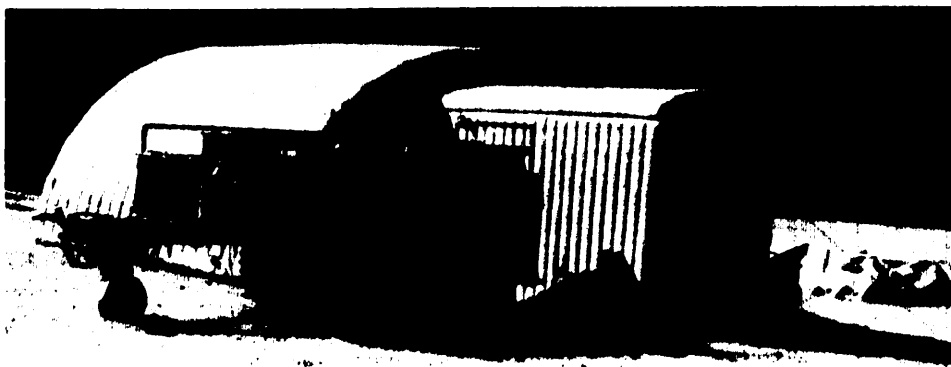
Disassembly and return to the transit configuration can also be accomplished in approximately 30 minutes. Basically the shelter system consists of an inflatable entrance, an inflatable shelter, a military standard gasoline engine, a gas-particulate filter assembly, an air conditioning system, heating system, centrifugal blower, generator, an entrance gas-particulate filter unit, an air-evacuation fan, emergency shelter supports, and the necessary cables, controls, and flexible ducts. A modified 2-wheel military standard model M105A2, 1½-ton trailer transports the system. The entire system can be air-dropped.



RIGHT FRONT THREE-QUARTER VIEW



TOP VIEW



LEFT FRONT THREE-QUARTER VIEW

Figure 1-1 ①. M51 inflatable chemical-biological collective protection shelter system (sheet 1 of 2).