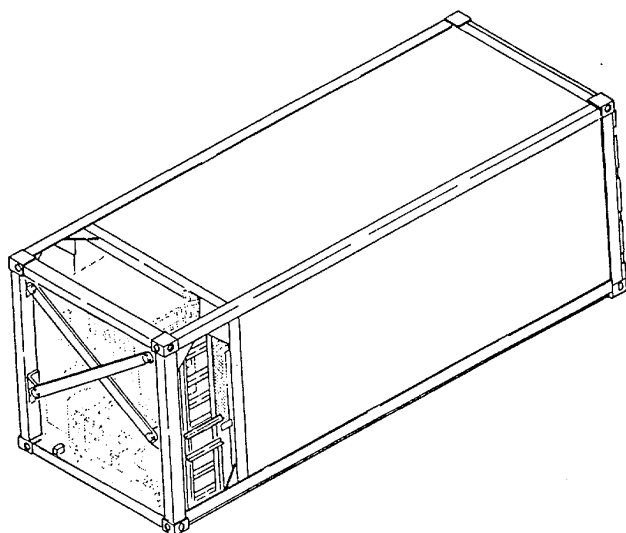


TECHNICAL MANUAL

**OPERATOR'S, UNIT, DIRECT SUPPORT
AND GENERAL SUPPORT
MAINTENANCE MANUAL
FOR
CONTAINER, REFRIGERATED
MODEL SC219
NSN: 8145-01-337-9997**



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TECHNICAL MANUAL
NO. TM 55-8145-201-14

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 18 MAY 1992

OPERATOR'S, UNIT, DIRECT SUPPORT, AND GENERAL
SUPPORT
MAINTENANCE MANUAL
for
CONTAINER, REFRIGERATED
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NSN 8145-01-337-9997

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes, or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual direct to: Commander, U.S. Army Troop Support Command, ATTN: AMSTR-MMTS, 4300 Goodfellow Blvd., St. Louis, Mo. 63120-1798.

In either case, a reply will be furnished directly to you.

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HOW TO USE THIS MANUAL

Spend a few minutes looking through this manual. It has a new look that is very different tom the manuals you've been using. You'll find the new look is a lot easier to use, and you can find what you're looking for a lot faster.

Each chapter begins with an index that lists each paragraph or section in the chapter. Each section in the maintenance chapter also has an index that lists the procedures in the section and gives page numbers. Or you can look for the information you want in the alphabetical subject index at the back of the manual.

We got rid of as many words as we could and put in a lot of illustrations to show just about everything you will be doing to maintain your equipment.

The text is keyed to the illustration with callout numbers (sometimes words). The callout numbers are in parentheses in the text.

So, HOW DO YOU USE THIS MANUAL?

Like This:

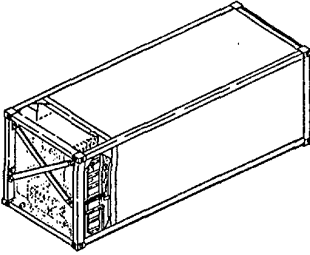
- 1. Suppose the container doors will not close and you want to troubleshoot the unit
- 2. Look at the cover and you'll see index boxes near the right-hand edge with subject titles in them. You'll find "UNIT TROUBLESHOOTING 4-11." You can skip over to page 4-11.

OR

- 3. Bend the pages a bit and look at the edges. You'll see black bars on some of the pages that are lined up with the index boxes on the cover.

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Table 4-1. Unit Preventive Maintenance Checks and Services for Model SC-219 - cont.

Item No.	Interval	Location	Procedure	Not Fully Mission Capable If:
		Item to Check/Service		
6	Monthly	EXTERIOR	Inspect for cracked, bent or broken corner fittings and frame members.	Frame or welds cracked.
		Container Frame		
7	Monthly	INTERIOR	Inspect for bare metal and corrosion.	
		Container Frame		

Section IV. UNIT TROUBLESHOOTING PROCEDURES

4-10. INTRODUCTION.

This section provides the troubleshooting information for the Refrigerated Container at the Unit Maintenance level. It consists of the symptom index, listing the most common malfunction symptoms, and the troubleshooting table, Table 4-2. This table repeats the malfunctions, and provides the procedural steps and corrective actions necessary to return the system to operational readiness.

4-11. TROUBLESHOOTING.

- The troubleshooting table lists the common malfunctions which you may find during operation of the refrigerated container. You should perform the tests, inspections and corrective actions in the order they appear in the table.
- This table cannot list all the malfunctions that may occur, all the tests or inspections needed to find the fault, or all the corrective actions needed to correct the fault. If the equipment malfunction is not listed or actions listed do not correct the fault, notify your supervisor.
- Refer to TM 9-4110-252-14 for troubleshooting malfunctions on the refrigeration unit.
- Refer to TM 5-6115-585-12/34 for troubleshooting malfunctions on the generator set.

4-12. MALFUNCTION INDEX.

Malfunction	Page
1 Rear Doors Will Not Close	4-12
2 Water Will Not Drain from Container Floor	4-12
3 Temperature Recorder Does Not Record or Does Not Record Properly	4-12
4 Temperature Inside Container Will Not Stabilize	4-13
5 Generator Set Not Operating Properly	4-13

4-11

- If you put your thumbnail on the black bar that is lined up with the box on the cover for UNIT TROUBLESHOOTING and open the manual, you'll be on page 4-11.
- On page 4-11, you'll find Section IV, UNIT TROUBLESHOOTING PROCEDURES. The first major item in the section is a SYSTEM INDEX that list the major assemblies that make up the Refrigerated Container. Look for REAR DOORS WILL NOT CLOSE in the Malfunction column. Item 1 under REAR DOORS WILL NOT CLOSE will give you page number 4-12.

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Table 4-2. Unit Troubleshooting

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. REAR DOORS WILL NOT CLOSE		
	Step 1. Inspect for torn, loose or damaged door seals in door closure area.	Repair rear door (para. 4-30).
	Step 2. Inspect doors for bent, cracked, or worn latch handles and door locking hardware.	Repair rear door (para. 4-30).
	Step 3. Inspect door for cracked, bent, or frozen hinges.	If door is damaged or defective, notify direct support maintenance.
2. WATER WILL NOT DRAIN FROM CONTAINER FLOOR.		
	Check for clogged or damaged floor drains.	Remove dirt and debris from floor drain.
		If clog cannot be removed or drain is damaged, replace floor drain (para. 4-35).
3. TEMPERATURE RECORDER DOES NOT RECORD OR DOES NOT RECORD PROPERLY.		
	Step 1. Check for loose thermometer element coupling at temperature recorder.	Tighten thermometer element screws on bottom of temperature recorder.
		Test and adjust thermometer (para 4-21).
	Step 2. Check that temperature recorder stylus is in contact with paper chart.	If stylus is bent or broken, replace temperature recorder (para. 4-19).
	Step 3. Inspect thermometer element sensing line for damage.	Replace thermometer element (para. 4-20).
	Step 4. Inspect thermometer bulb (mounted on container front) wall for damage.	Replace thermometer element (para. 4-20).

4-12

6. Turn to page 4-12 and find the malfunction "REAR DOORS WILL NOT CLOSE."
7. As you do the tests and corrective actions in the order listed, you will get to "Inspect for torn, loose or damaged door seals in door closure area." The corrective action directs you to "Repair rear door (para 4-30)."

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4-30. REAR DOOR REPAIR.

This task consists of: a. Disassembly b. Cleaning c. Inspection
d. Repair e. Assembly

INITIAL SET-UP:

Tools:	Detergent (Item 1, App D)
General Mechanics Tool Kit (Item 4, App B)	Wiping rag (Item 6, App D)
Portable Drill (Item 2, App B)	Repair kit (Item 9, App D)
Drill Bit Set (Item 2, App B)	References:
Rivet Tool (Item 2, App B)	TM 9-4110-252-14
Torx Bit (Item 1, App B)	TM 6-6115-585-12/34
Torx Socket (Item 4, App B)	Equipment Conditions:
Material/Parts:	Refrigeration unit shutdown (TM 9-4110-252-14)
Blind rivet (9) (Item 13, App F)	Generator set shutdown (TM 5-6115-585-12/34)
Blind rivet (124) (Item 1, App F)	Document holder removed (para 4-16)
Adhesive (A/R) (Item 15, App D)	Escape door removed (para 4-23)
	Rear doors removed (para 5-2)

NOTE
Disassemble rear doors only to the extent required to replace defective components.

a. **Disassembly.**

- (1) Using portable drill and drill bit, remove nine rivets (30) and three spacers (31) from backing sheet (1).
- (2) Using portable drill and drill bit, remove 60 rivets (2) from backing sheet (1).
- (3) If installed, remove six plugs (29) from backing sheet (1).
- (4) Carefully remove backing sheet (1) from seal (4) and insulation (28).
- (5) Using portable drill and drill bit, remove 64 rivets (26), four retaining strips (3, 5, 25, and 27) and door seal (4) from door (9).
- (6) Remove 51 screws (24) and four retainer frames (8, 10, 21, and 22) from door (9).

NOTE
Only insulation directly over power brace and hinge mounting hardware needs to be removed. Do not remove entire sheet of insulation unless damaged.

- (7) Cut out and remove insulation (28) from mounting hardware securing power braces (18 and 20) and hinges (12) to door (9).

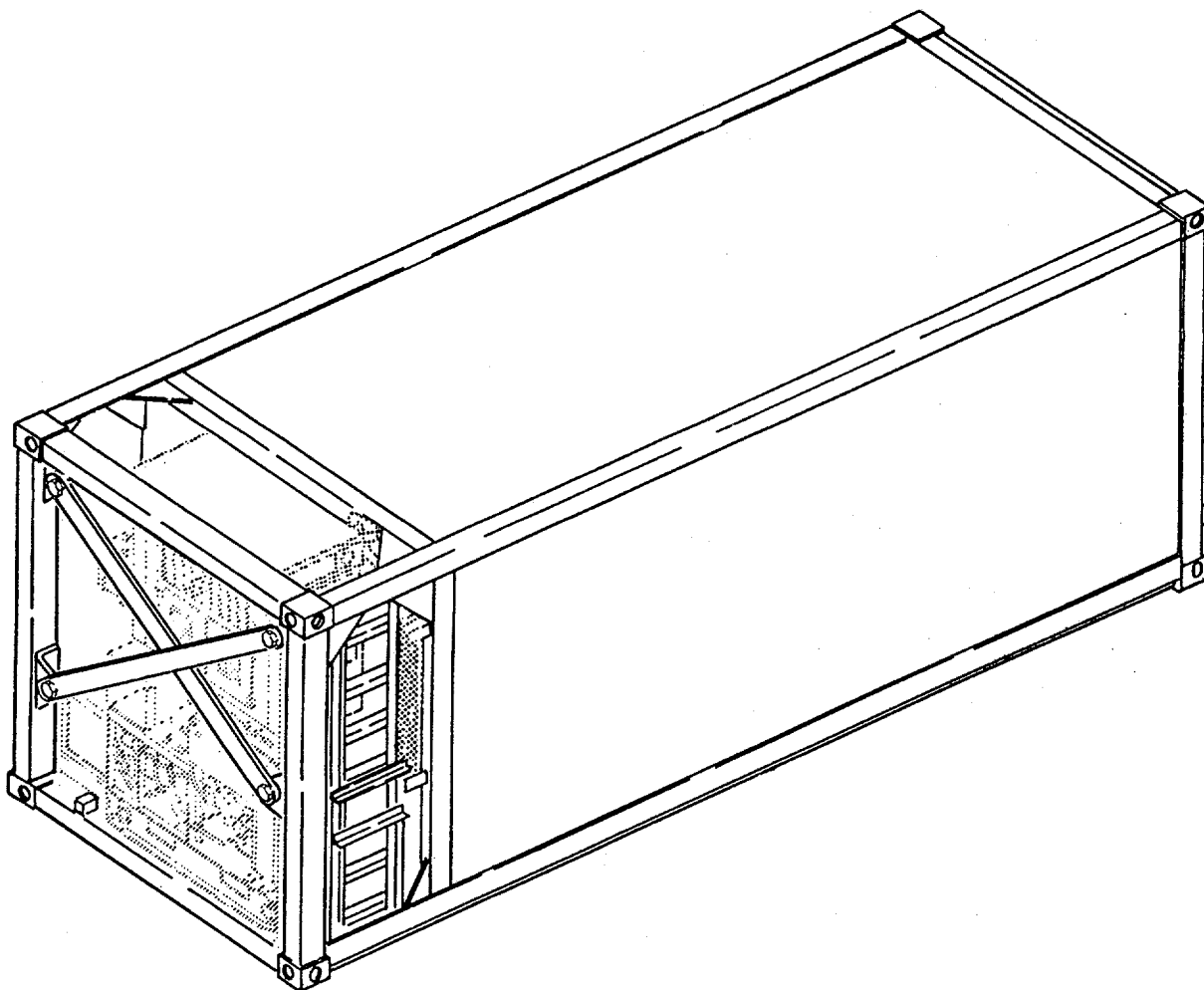
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4-30. REAR DOOR REPAIR - cont.

4-54

4-55

8. Turn to paragraph 4-30 and look at the procedure. The "INITIAL SETUP" section tells you what tools, materials, and parts are needed to complete this task. It also tells you what you must do before starting this task and it gives general warnings about hazards that can exist while you perform this task.
9. The procedure itself has a picture to show you where to look and what to look at, plus the steps you will perform to complete the task.
10. Notice the numbered arrows. These are the callout numbers. As you read each step, we tell you where to look by including the callout number (in parentheses) after the name of each component we call out.
11. Do the procedure, then check to see if you have corrected the fault symptom.



CHAPTER 1

INTRODUCTION

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Section I. GENERAL INFORMATION

1-1. SCOPE.

This manual covers Operating Instructions and Unit, Direct Support, and General Support maintenance procedures required to operate and maintain the Refrigerated Container, Model SC-219, less generator set and refrigeration unit. The refrigerated container is designed to be used with the Refrigeration Unit, Model CH-609-32, mounted on the front wall panel. The refrigerated container provides storage and transport of perishable materiel.

1-2. MAINTENANCE FORMS, RECORDS, AND REPORTS.

Department of the Army Forms and procedures used for equipment maintenance will be those prescribed by DA Pam 738-750 (The Army Maintenance Management System (TAMMS) (Maintenance Management Update).

1-3. DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE.

Methods and procedures for destruction of Army materiel to prevent enemy use are covered in TM 750-244-3.

1-4. CORROSION PREVENTION AND CONTROL.

- a. Corrosion Prevention and Control (CPC) of Army Materiel is a continuing concern. It is important that any corrosion problems with this item be reported so that the problem can be corrected and improvements can be made to prevent the problem in future items.

1-4. CORROSION PREVENTION AND CONTROL - cont.

- b. While corrosion is typically associated with rusting of metals, it can also include deterioration of other materials, such as rubber and plastic. Unusual cracking, softening, swelling or breaking of the materials may be a corrosion problem.
- c. If a corrosion problem is identified, it can be reported using Standard Form 368, Product Quality Deficiency Report Using key words such as "rust", "deterioration", or "cracking" will insure that the information is identified as a CPC problem. The form should be submitted to the address specified in DA Pam 738-750.

1-5. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIRs).

If your container needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Put it on an SF 368 (Quality Deficiency Report). Mail it to us at :Commander, U.S. Army Troop Support Command, ATTN: AMSTR-MOF, 4300 Goodfellow Boulevard, St. Louis, MO 63120-1798. We'll send you a reply.

1-6. NOMENCLATURE CROSS REFERENCE LIST.

Common Name
Container

Official Nomenclature
Container, Refrigerated, Model SC-219

1-7. LIST OF ABBREVIATIONS.

Abbreviation
°F
Hz

Nomenclature
Degrees Fahrenheit
Hertz

1-8. GLOSSARY.

Term

Stylus

Description

A point used to mark or write on paper. The temperature recorder stylus marks the paper chart to record the temperature changes inside the container.