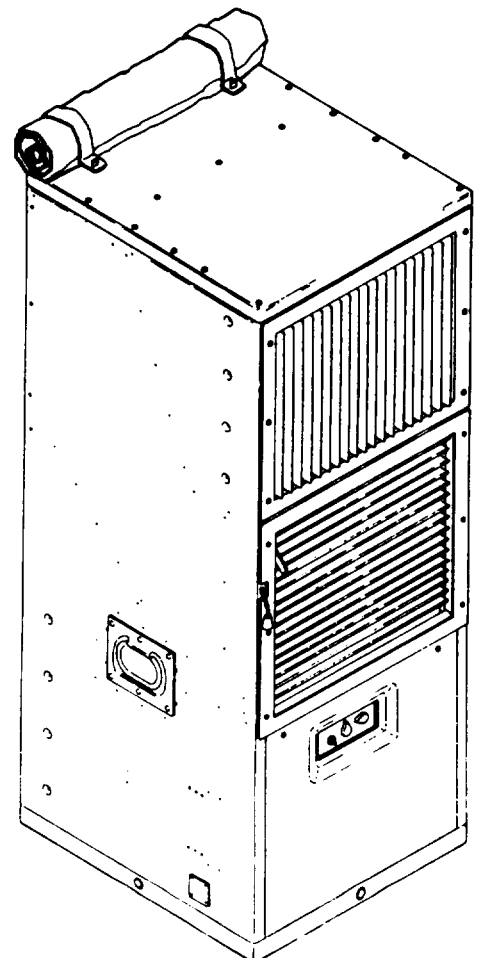
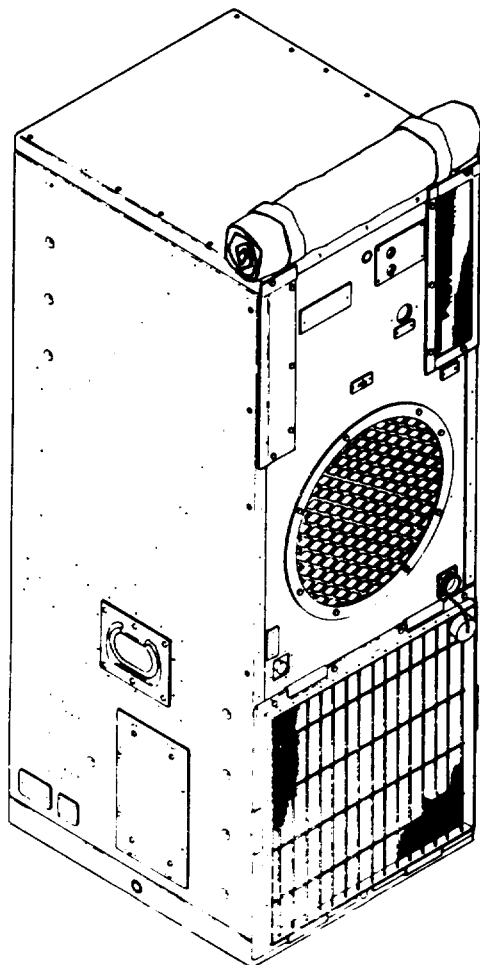


**TM 5-4120-356-14**  
**TO 35E9-263-1**

**TECHNICAL MANUAL**

**OPERATOR'S, ORGANIZATIONAL, DIRECT SUPPORT  
AND GENERAL SUPPORT MAINTENANCE MANUAL**

**AIR CONDITIONER, VERTICAL COMPACT**  
**18,000 BTU/HR, 208 VOLT, 3-PHASE, 50/60 HZ**  
**MODEL 18KV-208-3-60      NSN 4120-01-089-4053**



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**HEADQUARTERS, DEPARTMENT OF THE ARMY**

**12 AUGUST 1981**

TECHNICAL MANUAL

NO. 5-4120-356-14

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
Washington DC, 12 August 1981

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Air Conditioner, Vertical Compact  
18,000 BTU/HR, 208 volt, 3-phase, 50/60 HZ  
Model 18KV-208-3-60

NSN 4120-01-089-4063

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes, or if you know of any way to improve 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 directly to: commander, U.S. Army Troop Support Command, ATTN: AMSTR-MMTS, 4300 Goodfellow Boulevard, St. Louis, MO 63120-1798. A reply will be furnished to you.

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**CHAPTER 1**  
**INTRODUCTION**  
**Section I. General**

**1-1. SCOPE**

- a. Type of Manual: Operator's, Organizational, Direct Support and General Support Maintenance.
- b. Model Number and Equipment Name: TM18KV-208-3-60 Air Conditioner, Vertical Compact, 18,000 BTU/HR.
- c. Purpose of Equipment: The air conditioner can be used in temporary buildings, shelters, mobile van and trailers. The unit accomplishes three functions; cooling, heating and ventilation.

**1-2. MAINTENANCE FORMS AND RECORDS**

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).

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

Destruction of the air conditioner to prevent enemy use shall be in accordance with TM 750-244-3, Procedure for Destruction of Equipment.

**1-4. PREPARATION FOR STORAGE AND SHIPMENT**

Seal all openings in the air conditioner cabinet with barrier material and sealing tape. Cover the entire cabinet with a protective material

- a. Placement of equipment in administrative storage should be for short periods of time when a shortage of maintenance effort exists. Items should be in mission readiness within 24 hours or within the time factors as determined by the directing authority. During the storage period appropriate maintenance records will be kept.

- b. Before placing equipment in administrative storage, current maintenance services and equipment serviceable criteria (ESC) evaluations should be completed, shortcomings and deficiencies should be corrected and all modification work orders (MWO's) should be applied.

- c. Storage site selection. Inside storage is preferred for items selected for administrative storage. If inside storage is not available, trucks, vans, conex containers and other containers maybe used.

**1-5. RADIO INTERFERENCE SUPPRESSION**

Essentially, suppression is attained by providing a low resistance path to ground for stray currents. The methods used include shielding the ignition and high frequency wires, grounding the frame with bonding straps, and using capacitors and resistors.

**1-6. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR's)**

If your air conditioner 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. Let us know why you don't like the design. Tell us why a procedure is hard to perform. Put it on an SF 368 (Quality Deficiency Report). Mail it to us at U.S. Army Troop Support Command, ATTN: AMSTR-MOF, 4300 Goodfellow Boulevard, St. Louis, MO 63120-1798. We'll send you a reply.

**1-7. HAND RECEIPT**

Hand receipts for Components of End Item (COEI), Basic Issue Items (BII), and Additional Authorization List (AAL) items are published in a Hand Receipt manual, TM 5-4120-356-14-HR. This manual is published to aid in property accountability and is available through: Commander, U.S. Army Adjutant General Publications Center, 2800 Eastern Blvd., Baltimore, MD 21220.

## Section II. Equipment Description

### 1-8. **EQUIPMENT PURPOSE**

The 18,000 BTU/HR Air Conditioner is used primarily in van type enclosures. The unit accomplishes three functions; ventilating, cooling and heating.

### 1-9. **CAPABILITIES AND FEATURES**

The air conditioner is semi-portable and has a capacity of 18,000 BTU/HR. The unit operates on 208 volts, 3-phase, 50/60 Hz power. Intake air for cooling and heating enters the unit in either of two modes: 100 percent recirculated air, or partially recirculated air and partially fresh outside air. Air may be drawn directly from the outside, or may be filtered if the unit is provided with a chemical, biological, radiological (CBR) filter unit. The unit is equipped with an air conditioner cover which is used for protection of the condenser coil and fan when the air conditioner is not in operation.

### 1-10. **LOCATION AND DESCRIPTION OF MAJOR COMPONENTS**

Figures 1-1 through 1-4 show the location of and describes the major component of the air conditioner.

### 1-11. **DIFFERENCES BETWEEN MODELS**

This manual was prepared for the Tiernay Manufacturing Model TM18KV-208-3-60.

### 1-12. **PERFORMANCE DATA**

Electrical Requirements:	208 volts, 50/60 Hz, 3-Phase
Capacity:	18,000 BTU/HR
Refrigerant Capacity:	4 pounds (1.7kg) of refrigerant Specification BB-F-1421, Type 22
Cabinet Dimensions: Length:	17 inches (42cm)
Width:	17 inches (42cm)
Height:	46 inches (115cm)
weight:	258 pounds (71.667 kg)

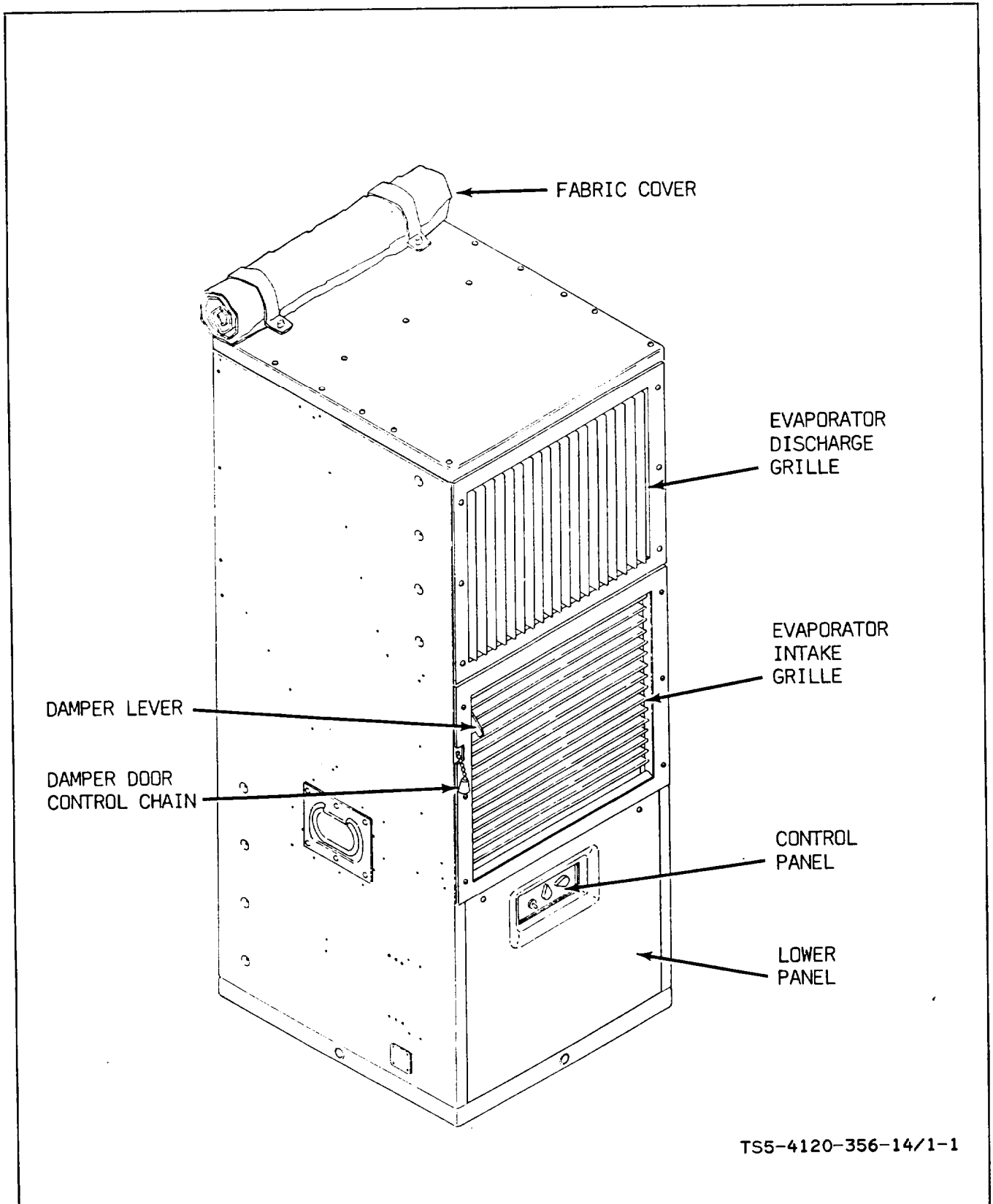
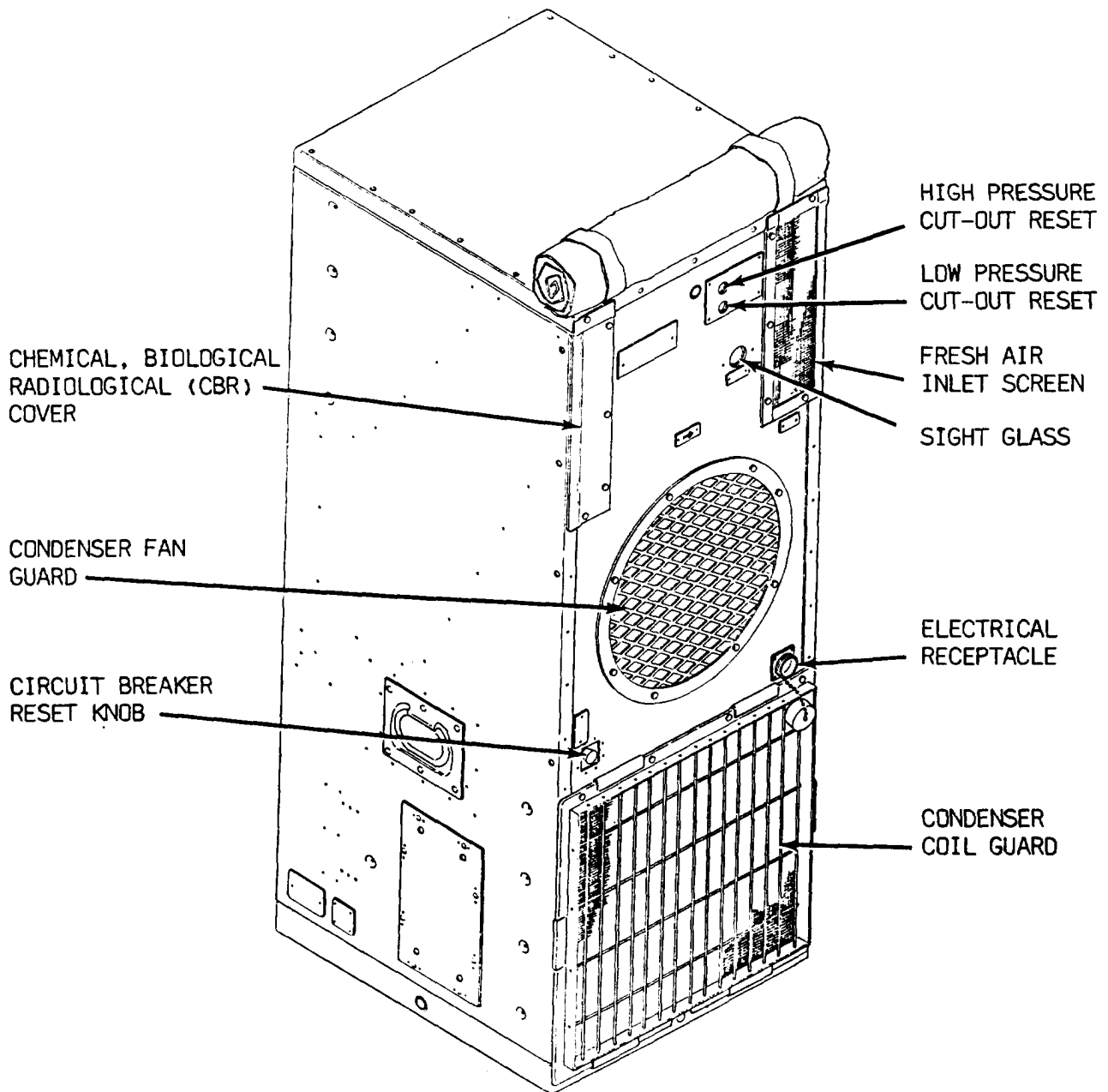


Figure 1-1. Right front three-quarter view of air conditioner



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Figure 1-2. Left rear three-quarter view of air conditioner