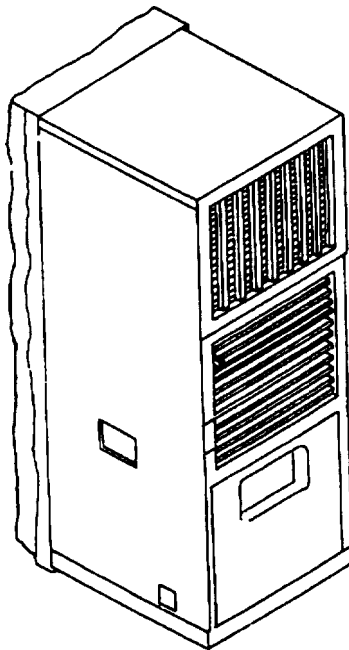


TECHNICAL MANUAL

**Operator's, Unit, Direct Support,
And General Support Maintenance Manual**



**AIR CONDITIONER, VERTICAL, COMPACT,
18,000 BTU/HR
208 VOLT, 3 PHASE, 50/60 HERTZ
NSN 4120-01-21 4-3692**

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*** This manual supersedes TM 5-4120-388-14, dated 8 May 1987.**

**HEADQUARTERS, DEPARTMENT OF THE ARMY
15 SEPTEMBER 1993**

TECHNICAL MANUAL

NO. 9-4120-388-14

HEADQUARTERS
DEPARTMENTS OF THE ARMY
WASHINGTON D. C., 15 September 1993

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AIR CONDITIONER, VERTICAL COMPACT
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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 or 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, US Army Aviation and Troop Command, ATTN: AMSAT-I-MP, 4300 Goodfellow Blvd., St. Louis, MO 63120-1798. A reply will be furnished directly to you.

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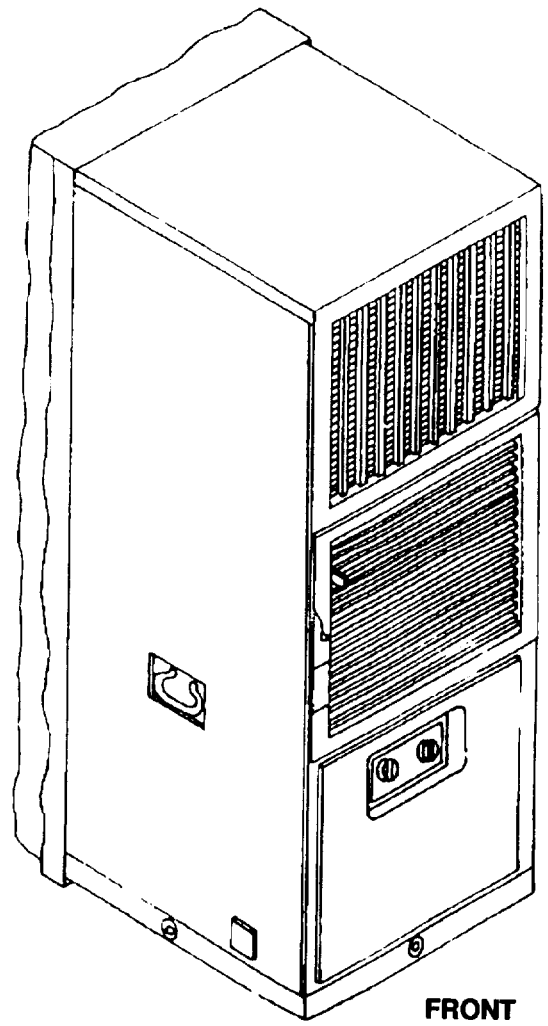
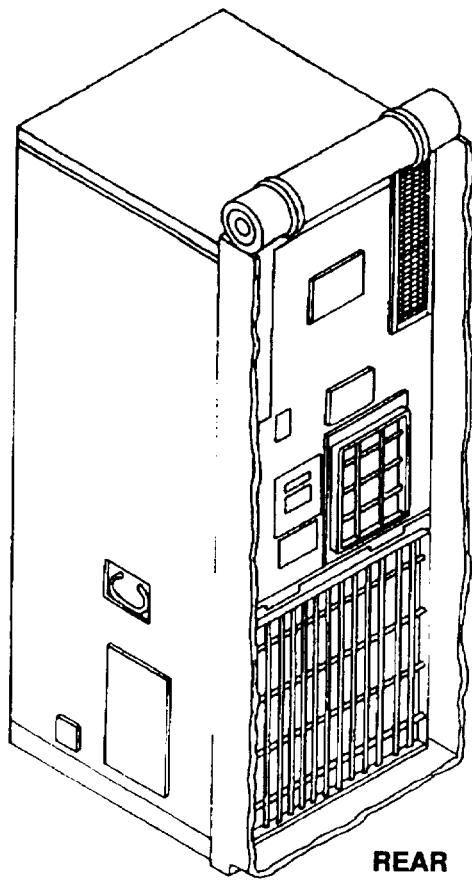


Figure 1-1. Air Conditioner

CHAPTER 1

INTRODUCTION

Section I. GENERAL INFORMATION

1-1. SCOPE.

- a. Type of Manual: Operator's, Unit, Direct Support and General Support Maintenance Manual.
- b. Model Number and Equipment Name: ATACS Model ECU18VC326 Vertical, Compact, 18,000 BTU/HR, 208 Volt, 3-Phase, 50/60 Hertz Air Conditioner.
- c. Purpose of Equipment: Cools, heats and ventilates enclosed spaces. The unit covered by this manual is designed for cooling and heating air to a desired predetermined range and circulating the conditioned air to provide heating and cooling of equipment or personnel within the conditioned area.

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. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIRs). 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 or performance. Tell us why a procedure is hard to perform. Put it on an SF-368 (Quality Deficiency Report). Mail it to us at Commander, Headquarters, U.S. Army Aviation and Troop Command, ATTN: AM-SAT-I-MDO, 4300 Goodfellow Boulevard, St Louis, MO 63120-1798. We'll send you a reply.

1-4. DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE. Command decisions, according to the tactical situation, will determine when destruction of the air conditioning unit will be accomplished. A destruction plan will be prepared by the using organization, unless one has been prepared by higher authority. For general destruction procedures for this equipment, refer to TM 750-244-3, Procedures for Destruction of Equipment to Prevent Enemy Use.

1-5. PREPARATION FOR STORAGE OR SHIPMENT. Administrative storage of the air conditioner shall conform generally with the provisions of TM 740-90-1, Administrative Storage of Equipment

Section II. EQUIPMENT DESCRIPTION AND DATA

1-6. PURPOSES, CAPABILITIES, AND FEATURES.

- a. Purpose of ECU18VC326 Air Conditioner. The Air Conditioner is designed to ventilate, cool or heat, and to filter air
- b. Capabilities and features:
 - (1) Provides a maximum of 18,000 BTU/HR of cooling or 12,000 BTU/HR of heating.
 - (2) Has two stages of heat.
 - (3) Provides source of filtered outside (fresh) ventilation air.
 - (4) Is self contained in a single cabinet that is ideally suited for van, shelter, or room installations.
 - (5) Operates in environmental conditions from tropic to arctic.
 - (6) Is fully portable.
 - (7) Has connection point for an NBC (nuclear, biological, chemical filter).
 - (8) Has alternate power input connection locations to provide for a variety of installations.
 - (9) Designed for low-noise level operation.

1-7. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS.

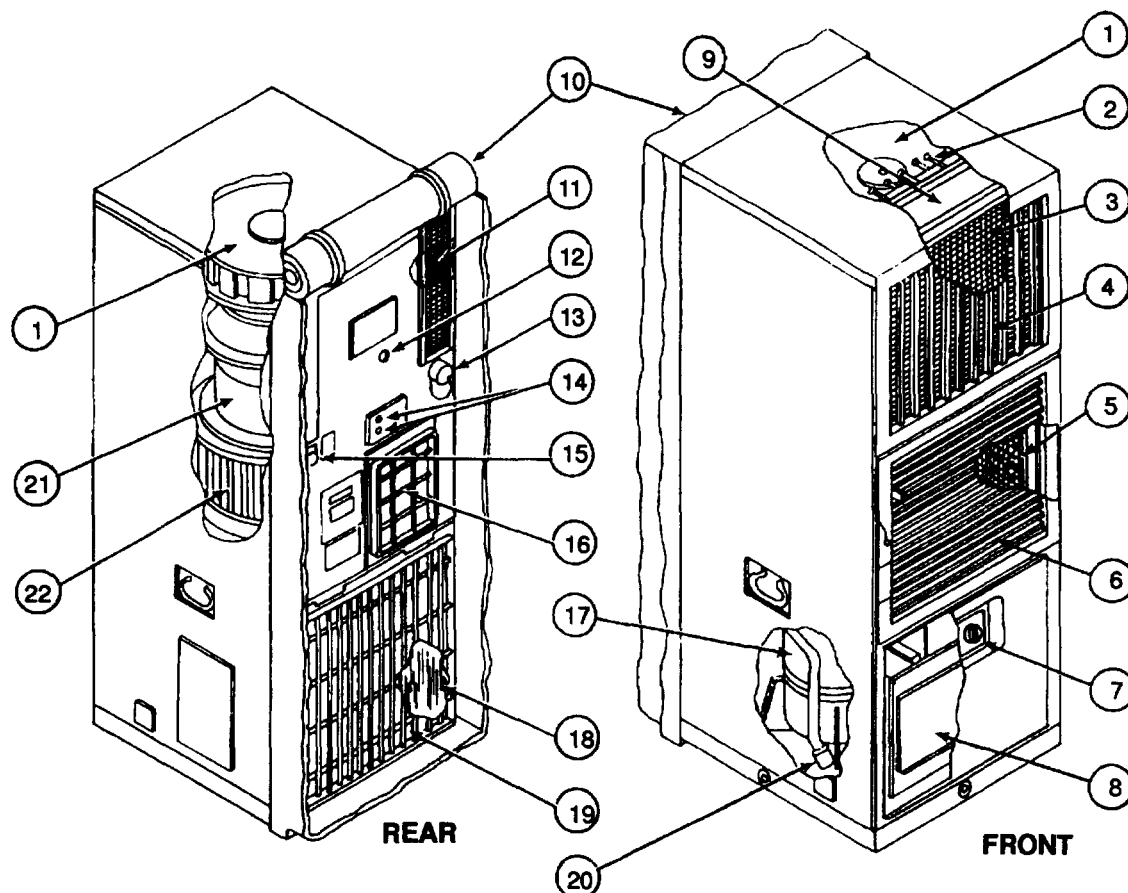


Figure 1-2. Location of Major Components

1. **CONDITIONED AIR (EVAPORATOR) FAN** - Draws air into the evaporator section and exhausts it through the evaporator (cooling) coil and heater elements into the room or enclosure.
2. **HEATER ELEMENTS (HR 1 through HR 6)** - Consists of two banks of three elements each. Only one bank operates in the LO HEAT mode. Both banks operate in the HI HEAT mode, however the temperature control thermostat controls only one bank.
3. **MIST ELIMINATOR** - Prevents condensate (water) from being blown from the coil into the room or enclosure.
4. **CONDITIONED AIR DISCHARGE GRILLE** - Adjustable louvers allow directional control of conditioned air.
5. **RETURN AIR FILTER** - Provides filtered return air.
6. **INTAKE (RETURN) AIR GRILLE** - Adjustable louvers allow control of outside (fresh) and return (from room or enclosure) air.
7. **CONTROL PANEL** - Contains a five position mode selector switch and a temperature control thermostat.
8. **JUNCTION BOX** - Contains and protects electrical system control devices.
9. **EVAPORATOR COIL** - Serves as a heat exchanger by transferring heat from the air passing over the tubing and fins to the refrigerant passing through the tubing.
10. **FABRIC COVER** - Shown on rearview in stowed (operational) position. When rolled down and snapped it protects the rear (exposed) surface of the unit.
11. **FRESH AIR FILTER AND DAMPER** - Provides filtered outside air.