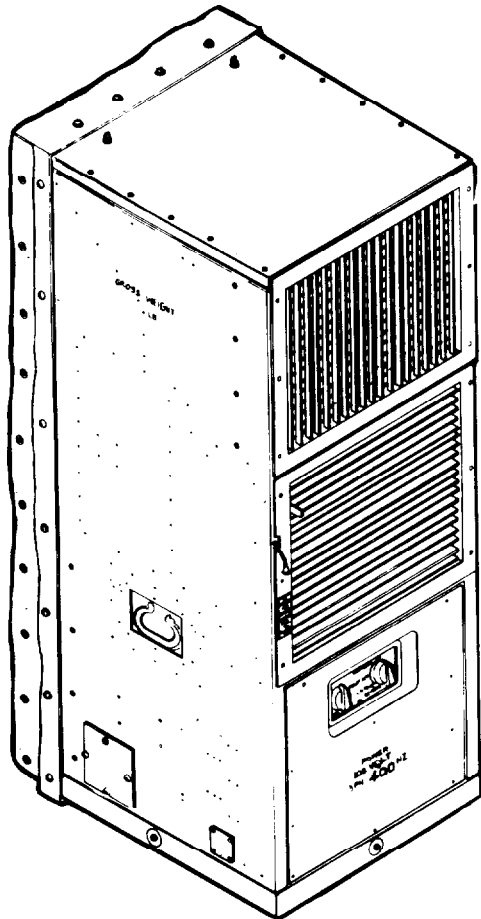


TECHNICAL MANUAL

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



AIR CONDITIONER, VERTICAL, COMPACT,
18,000 BTU/HR
208 VOLT, 3 PHASE, 400 HERTZ

NSN 4120-01-127-0716

INTRODUCTION	1
OPERATING INSTRUCTIONS	2
OPERATOR'S MAINTENANCE INSTRUCTIONS	3
ORGANIZATIONAL MAINTENANCE INSTRUCTIONS	4
DIRECT SUPPORT MAINTENANCE INSTRUCTIONS	5
GENERAL SUPPORT MAINTENANCE INSTRUCTIONS	6
REFERENCES	A
MAINTENANCE ALLOCATION CHART	B
COMPONENTS OF END ITEM AND BASIC ISSUE ITEMS LISTS	C
ADDITIONAL AUTHORIZATION LIST	D
EXPENDABLE SUPPLIES AND MATERIALS LIST	E
INDEX	I

TECHNICAL MANUAL

TM 5-4120-377-14

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 19 September 1983

**OPERATOR'S, ORGANIZATIONAL,
DIRECT SUPPORT, AND GENERAL SUPPORT
MAINTENANCE MANUAL
FOR
AIR CONDITIONER, VERTICAL, COMPACT,
18,000 BTU/HR
208 VOLT, 3 PHASE, 400 HERTZ**

KECO MODEL F18T4-2S NSN 4120-01-127-0716

APPLIED MODEL 3788 NSN 4120-01-220-7391

REPORTING OF 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, Attention: AMSTR-MCTS, 4300 Goodfellow Boulevard, St. Louis, Missouri 63120-1798. A reply will be furnished to you.

TABLE OF CONTENTS

	Page
CHAPTER 1. INTRODUCTION	1-1
Section I General information	1-1
Section II Equipment Description	1-2
Section III Technical Principles of Operation.	1-6
CHAPTER 2. OPERATING INSTRUCTIONS	2-1
Section I Description and Use of Operator's Controls and Indicators	2-1
Section II Operator Preventive Maintenance Checks and Services (PMCS)	2-4
Section III Operation Under Usual Conditions.	2-9
Section IV Operation Under Unusual Conditions	2-23
CHAPTER 3. OPERATOR'S MAINTENANCE INSTRUCTIONS	3-1
Section I Lubrication Instructions	3-1
Section II Troubleshooting Procedures	3-2
CHAPTER 4. ORGANIZATIONAL MAINTENANCE INSTRUCTIONS	4-1
Section I Repair Parts, Special Tools, TMDE, and Support Equipment.	4-1
Section II Service Upon Receipt	4-2

Section	III Lubrication	4-32
Section	IV Preventive Maintenance Checks and Services (PMCS)	4-33
Section	V Troubleshooting	4-43
Section	VI Maintenance Procedures	4-55
Section	VII Preparation for Storage or Shipment.	4-128
CHAPTER	5. DIRECT SUPPORT MAINTENANCE INSTRUCTIONS	5-1
Section	I General Information	5-1
Section	II Maintenance Procedures.	5-2
CHAPTER	6. GENERAL SUPPORT MAINTENANCE INSTRUCTIONS	6-1
Section	I General Information	6-1
Section	II Maintenance Procedures	6-2
APPENDIX	A. REFERENCES	A-1
APPENDIX	B. MAINTENANCE ALLOCATION CHART	B-1
Section	I Introduction	B-1
Section	II Maintenance Allocation Chart.	B-4
Section	III Tool and Test Equipment Requirements	B-8
Section	IV Remarks	B-9
APPENDIX	C. COMPONENTS OF END ITEM AND BASIC ISSUE ITEMS LISTS	C-1
Section	I Introduction	C-1
Section	II Components of End Item	C-2
Section	III Basic Issue Items	C-4
APPENDIX	D. ADDITIONAL AUTHORIZATION LIST	D-1
Section	I Introduction	D-1
Section	II Additional Authorization List.	D-2
APPENDIX	E. EXPENDABLE SUPPLIES AND MATERIALS LIST	E-1
Section	I Introduction	E-1
Section	II Expendable Supplies and Materials List	E-2
	I. ALPHABETICAL INDEX	I-1

LIST OF FIGURES

	Figure Number	Page
Air Conditioner	1-1	1-0
Location of Major Components	1-2	1-3
Refrigeration Schematic	1-3	1-6
Operator's Controls Front	2-1	2-2
Operator's Controls Rear	2-2	2-3
Table 2-1 Illustration 1		2-5
Table 2-1 Illustration 2		2-5
Table 2-1 Illustration 3		2-6
Table 2-1 Illustration 4		2-6
Table 2-1 Illustration 5		2-7
Table 2-1 Illustration 6		2-7
Table 2-1 Illustration 7		2-8
Table 2-1 Illustration 8		2-8
Fabric Cover	2-3	2-9
Air Openings and Drains	2-4	2-10
VENTILATE Control Setting	2-5	2-13
Fresh Air Damper (Door) Adjustment	2-6	2-13
Louver Adjustment	2-7	2-14
LO HEAT Control Setting	2-8	2-15
Fresh Air Damper (Door) Adjustment	2-9	2-15
Louver Adjustment	2-10	2-16
HI HEAT Control Setting	2-11	2-16
Fresh Air Damper (Door) Adjustment	2-12	2-17
Louver Adjustment	2-13	2-17
Fabric Cover	2-14	2-18
Fabric Cover	2-15	2-19
COOL Control Setting	2-16	2-19
Fresh Air Damper (Door) Adjustment	2-17	2-20
Louver Adjustment	2-18	2-20
OFF Setting	2-19	2-21
Information Plates	2-20	2-22
CBR Filter Connection Location	2-21	2-25
Table 3-1 Illustration 1		3-2
Table 3-1 Illustration 2		3-3
Table 3-1 Illustration 3		3-3
Table 3-1 Illustration 4		3-4
Table 3-1 Illustration 5		3-4
Table 3-1 Illustration 6		3-5
Table 3-1 Illustration 7		3-5
Table 3-1 Illustration 8		3-6
Table 3-1 Illustration 9		3-6
Table 3-1 Illustration 10		3-6
Table 3-1 Illustration 11		3-7
Table 3-1 Illustration 12		3-7
Table 3-1 Illustration 13		3-8
Table 3-1 Illustration 14		3-8
Unpacking	4-1	4-3
Installation Dimensions (Sheet 1 of 4)	4-2	4-5
(Sheet 2 of 4)	4-2	4-6
(Sheet 3 of 4)	4-2	4-7
(Sheet 4 of 4)	4-2	4-8
Lower Front Panel	4-3	4-10
Intake Grille and Filter	4-4	4-11
Control Panel	4-5	4-12

	Figure Number	Page
Sensing Bulb Secured for Remote Mounting	4-6	4-13
Block Off Assembly Installation	4-7	4-14
Interconnecting Remote Control Cable Diagram	4-8	4-15
Alternate Cable Connections through Return (Intake) Duct	4-9	4-16
Lower Front Panel	4-10	4-17
Cover Plate	4-11	4-17
Bulkhead Connector Removal	4-12	4-18
Cover Plate Installation	4-13	4-18
Bulkhead Connector Installation	4-14	4-19
Alternate Input Power Connector Location	4-15	4-20
Cover Plate Removal/Installation	4-16	4-20
J1 to P13 Harness Removal	4-17	4-21
Receptacle (J13)	4-18	4-21
Fabric Cover Removal	4-19	4-22
Wiring Diagram (Sheet 1 of 2)	4-20	4-25
(Sheet 2 of 2)	4-20	4-26
Electrical Schematic	4-20A	4-27
Input Power Cable Diagram	4-21	4-28
Table 4-1 Illustration 1		4-31
Table 4-1 Illustration 2		4-31
Table 4-1 Illustration 3		4-33
Table 4-1 Illustration 4		4-33
Table 4-1 Illustration 5		4-34
Table 4-1 Illustration 6		4-34
Table 4-1 Illustration 7		4-35
Table 4-1 Illustration 8		4-36
Table 4-2 Illustration 1		4-40
Table 4-2 Illustration 2		4-40
Table 4-2 Illustration 3		4-41
Table 4-2 Illustration 4		4-41
Table 4-2 Illustration 5		4-42
Table 4-2 Illustration 6		4-42
Table 4-2 Illustration 7		4-43
Table 4-2 Illustration 8		4-43
Table 4-2 Illustration 9		4-44
Table 4-2 Illustration 10		4-44
Table 4-2 Illustration 11		4-45
Table 4-2 Illustration 12		4-45
Table 4-2 Illustration 13		4-45
Table 4-2 Illustration 14		4-46
Table 4-2 Illustration 15		4-47
Table 4-2 Illustration 16		4-47
Table 4-2 Illustration 17		4-48
Fabric Cover	4-22	4-51
CBR Duct Cover	4-23	4-52
Access (Service Valves) Cover	4-24	4-53
Connector Cover Plates	4-25	4-54
Side Access Plate	4-26	4-55
Discharge (Outlet) Grille Assembly	4-27	4-56
Intake Grille Assembly	4-28	4-57
Condenser (Fan) Guard	4-29	4-58
Condenser Coil Guard	4-30	4-59
Fresh Air (Inlet) Screen	4-31	4-60
Top Panel	4-32	4-61
Lower Front Panel	4-33	4-62
Access Panel (Circuit Breaker)	4-34	4-63

	Figure Number	Page
Filter Mounting Plate	4-35	4-64
Rear Panel	4-36	4-65
Conditioned Air Filter	4-37	4-67
Fresh Air Filter	4-38	4-68
Mist Eliminator	4-39	4-69
Lower Front Panel	4-40	4-75
Intake Grille and Filter	4-41	4-76
Control Panel	4-42	4-76
Wiring Harness, Control Panel	4-43	4-78
Temperature Control Thermostat (S2)	4-44	4-80
Mode Selector (Rotary) Switch (S1)	4-45	4-82
Switch Position and Terminal Identification	4-46	4-83
Control Panel Housing	4-47	4-84
Block Off Assembly Prior to Installation	4-48	4-85
Block Off Assembly Installed	4-49	4-86
Wiring Harnesses	4-50	4-87
Radio Frequency Filter (FLI)	4-51	4-89
Lower Front Panel	4-52	4-91
Junction Box Removal/Installation	4-53	4-92
Reset Control Wire Connection	4-54	4-93
Lower Front Panel	4-55	4-94
Junction Box Cover	4-56	4-95
Circuit Breaker External Reset	4-57	4-96
Junction Box Wiring Harnesses	4-58	4-97
Transformer	4-59	4-98
Junction Box Cover	4-60	4-99
Circuit Breaker (CBI)	4-51	4-100
Fuses (F1, F2, and F3)	4-62	4-101
Junction Box Cover	4-63	4-102
Rectifier (CR1)	4-64	4-103
Time Delay Relay (K3)	4-65	4-105
Compressor Start Relay (K1)	4-66	4-106
Heater Relay (K2)	4-67	4-108
Fan Motor Relay (K4)	4-68	4-109
Terminal Boards (TB1 and TB2)	4-69	4-110
Junction Box Housing, Panel, and Cover	4-70	4-111
Heater Cutout (Thermostat) Switch (S4)	4-71	4-112
Electric Heater (Elements) (HR1 through HR6)	4-72	4-113
Heater Support	4-73	4-114
Evaporator Fan	4-74	4-115
Evaporator Inlet Bell	4-75	4-116
Evaporator and Condenser Fan Motor (B2) and Condenser Fan	4-76	4-118
Evaporator Coil	4-77	4-121
Condenser Coil	4-78	4-122
Condensate Traps	4-79	4-123
Evaporator and Condenser Fan Motor (KECO MODEL F18T4-2S)	5-1	5-4
Evaporator and Condenser Fan Motor (Applied Model 3788)	5-1.1	5-6.1
Access (Service Valve) Cover	5-2	5-7
Discharging Refrigerant	5-3	5-8
Nitrogen Purging Connection	5-4	5-10
Evacuation of Refrigeration System	5-5	5-14
Refrigerant Charging	5-6	5-15
Protective Caps and Access Cover	5-7	5-17
Access (Service Valves) Cover	5-8	5-18
Pressure Test Connection	5-9	5-18
Desiccant Refrigerant Dehydrator (Filter Drier)	5-10	5-23
Low Pressure Cut-Out Switch (S7)	5-11	5-24

	Figure Number	Page
High Pressure Cut-Out Switch (S6)	5-12	5-26
Service Valves	5-13	5-28
Solenoid Valve Coil Replacement (Applied Model 3788)	5-14	5-29
Solenoid Valve Coil Replacement (KECO Model F18T4-2S)	5-14.1	5-30
Solenoid Valves (L1 and L2)(KECO Model F18T4-2S)	5-15	5-31
Solenoid Valves (L1 and L2) (Applied Model 3788)	5-15.1	5-32
Liquid Quench Expansion Valve	5-16	5-32.1
Compressor Schematic	5-17	5-35
Compressor Replaceable Items	5-18	5-37
Compressor (B1)	5-19	5-39
Liquid Sight Indicator (Sight Glass)	5-20	5-42
Expansion Valve	5-21	5-43
Mist Eliminator.	5-22	5-47
Evaporator Coil	5-23	5-48
Pressure Regulating Valve Access	5-24	5-50
Pressure Regulating Valve	5-25	5-52
Receiver	5-26	5-53
Pressure Relief Valve	5-27	5-54
Condenser Coil	5-28	5-55
Fresh Air Damper	5-29	5-58
Lifting Handles.	6-1	6 - 3
Components of End Item	C-1	C - 2

LIST OF TABLES

	Page
Table 2-1. Operator Preventive Maintenance Checks and Services	2-5
2-2. Operator Control Settings	2-11
3-1. Troubleshooting	3-2
4-1. Organizational Preventive Maintenance Checks and Services (PMCS)	4-31
4-2. Troubleshooting	4-40
4-3. Wire List	4-71
5-1. Pressure-Temperature Relationship of Saturated Refrigerant-22	5-21
5-2. Normal Operating Pressures (in full cooling DECREASE mode.)	5-22
5-3. Normal Operating Pressures (in By-Pass Cycle)	5-22

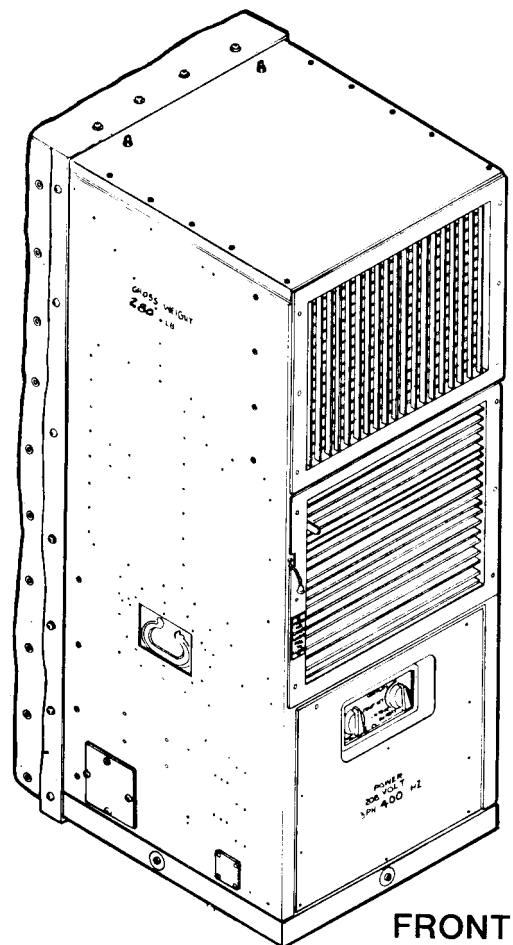
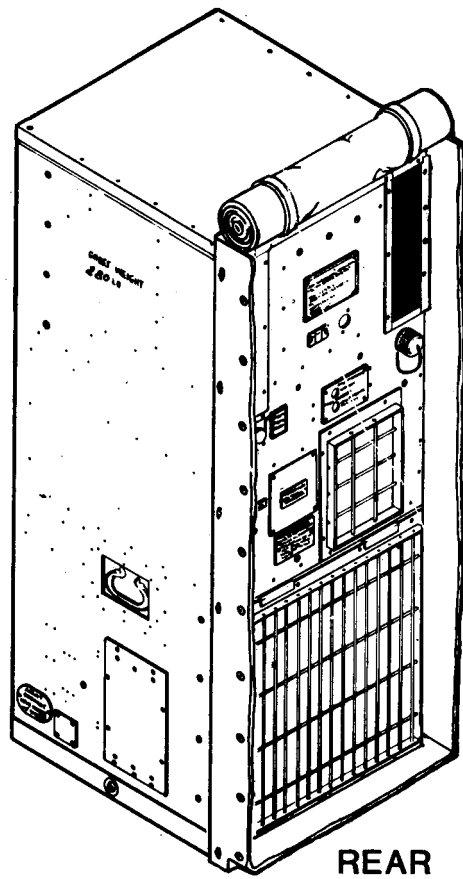


Figure 1-1. Air Conditioner

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CHAPTER 1

INTRODUCTION

Section I GENERAL INFORMATION

1-1. SCOPE

- a. Type of Manual. Operator's, Organizational, Direct Support, and General Support Maintenance Manual.
- b. Model Number and Equipment Name. Keco Model F18T4-2S and Applied Model 3788, Vertical, Compact, 18,000 BTU/HR, 208 Volt, 3 Phase, 400 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 736-750, The Army Maintenance Management System (TAMMS).

1-3. HAND RECEIPT MANUAL

This manual has a companion document with a TM number followed by HR (which stands for Hand Receipt). The TM 5-4120-377-14HR consists of preprinted hand receipts (DA Form 2062) that list end item related equipment (i.e., COEI, BII, and AAL) you must account for. As an aid to property accountability, additional -HR manuals may be requisitioned from the following source in accordance with procedures in Chapter 3, AR 310-2:

The US Army Publications Center
2800 Eastern Blvd.
Baltimore, MD 21220-2896

1-4. 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 or performance. Put it on a SF 368 (Quality Deficiency Report). Mail it to us at Commander, Headquarters, U.S. Army Troop Support Command, Attention: AMSTR-QX, 4300 Goodfellow Boulevard, St. Louis, Missouri 63120-1798. We will send you a reply.

1-5. DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE

Command decisions, according to 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.

1-6. PREPARATION FOR STORAGE OR SHIPMENT

Contact organizational organizational maintenance for air conditioning unit preparation for storage or shipment. (See para 4-67).

Section II EQUIPMENT DESCRIPTION

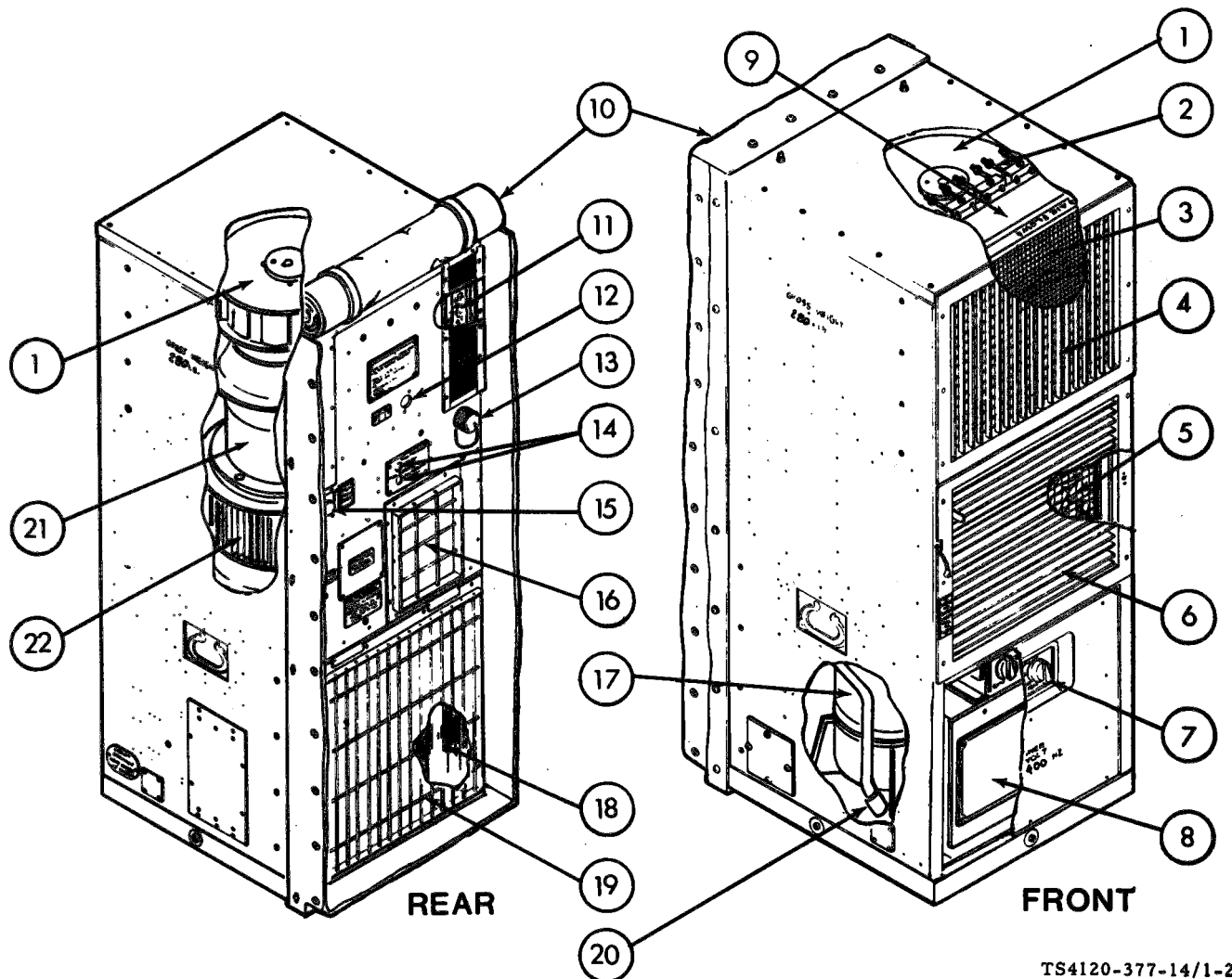
1-7. PURPOSE, CAPABILITIES, AND FEATURES

- a. Purpose of F18T4-2S and 3788 Air Conditioner. The Air Conditioners are designed to ventilate, cool or heat, and to filter air in rooms or enclosures.
- 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 a CBR (chemical, biological, radiological) filter.
 - (8) Has alternate power input connection locations to provide for a variety of installations.
 - (9) Designed for low-noise level operation.
- c. Special features
 - (1) The control panel may be removed from the unit and remote mounted.

NOTE

When control panel is remote mounted, a block off panel must be used on the air conditioner. The block off panel must be ordered separately. Interconnecting cables must also be fabricated. See installation instructions (para 4-7) for additional information.

1-8. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS



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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 H1 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.