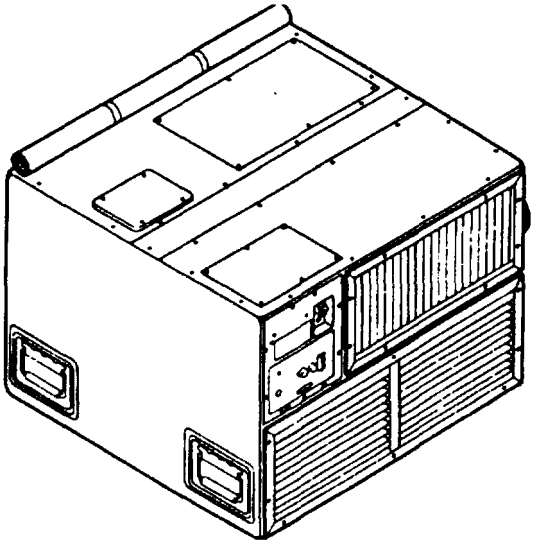
ARMY TM 9-4120-367-14
MARINE CORPS TM 07592 B-14/1

TECHNICAL MANUAL

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

AIR CONDITIONER, HORIZONTAL, COMPACT, 18,000 BTU/HR COOLING

MODEL	POWER	NSN
F18H	230V, Single Phase, 50/60 Hz	4120-00-411-3729 (EIC:VSJ)
F18H-3	208V, 3 Phase, 50/60 Hz	4120-01476-1753 (EIC:VUA)
K1F-18H-4	208V, 3 Phase, 400 Hz	4120-01-177-5990 (EIC:VWU)
F18H-3A	208V, 3 Phase, 50/60 Hz	4120-01-1224626 (EIC:VOU)
F18H-4A	208V, 3 Phase, 400 Hz	4120-01-1224627 (EIC:VUP)
MHP-204-08	208V, 3 Phase, 400 Hz	4120-01-286-8854 (EIC:VW4)



• **This manual supersedes TM 5-4120-367-14, dated 24 Nov 80.**

HEADQUARTERS, DEPARTMENTS OF THE ARMY AND THE MARINE CORPS

31 AUGUST 1993

TECHNICAL MANUAL
No. 9-4120-367-14

HEADQUARTERS
DEPARTMENTS OF THE
ARMY AND MARINE CORPS

WASHINGTON D.C., 31 August 1993

Operator's, Unit, Direct Support and General Support Maintenance Manual

AIR CONDITIONER, HORIZONTAL, COMPACT 18,000 BTU/HR COOLING

MODEL	POWER	NSN
F18H	230V, Single Phase, 50/60 Hz	4120-00-411-3729 (EIC:VSJ)
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K1F-18H-4	208V, 3 Phase, 400 Hz	4120-01-177-5990 (EIC: VWU)
F18H-3A	208V, 3 Phase, 50/60 Hz	4120-01-122-0626 (EIC:VUO)
F18H-4A	208V, 3 Phase, 400 Hz	4120-01-122-0627 (EIC:VUP)
MHP-20-4-06	208V, 3 Phase, 400 Hz	4120-01-286-8854 (EIC:VW4)

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 directly to: Commander, US Army Aviation and Troop Command, ATTN: AMSAT-I-MP, 4300 Goodfellow Blvd., St. Louis, MO 63120-1798. You may also submit your recommended changes by E-mail directly to <daf2028@st-louis-emh7.army.mil>. A reply will be furnished directly to you.

Marine Corps users submit NAVMC Form 10772 directly to: Commander, Code 850, Marine Corps Logistics Bases, 814 Radford Blvd., Albany, GA 31704-1128.

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*This manual supercedes TM 5-4120-367-14, dated 24 Nov 80.

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CHAPTER 1

INTRODUCTION

Section I. GENERAL INFORMATION

1.1 SCOPE.

1.1.1 Type of Manual. Operator's, Unit, Direct Support and General Support Maintenance Manual.

1.1.2 Model Numbers and Equipment Names. Keco Models, F18H, F18H-3, and K1F-18H-4, F18H-3A and F18H-4A, and Airtacs Model, MHP-20-4-08, 18,000 BTU/hr Cooling, air conditioners.

NOTE

Unless otherwise noted the FMH-3A and F18H-4A identical to the F18H-3 and K1F-18H-4, respectively.

1.1.3 Purpose of Equipment. Cools and heats enclosed space (shelter). The units covered by this manual are designed for cooling and heating air to a desired predetermined range and for circulating the conditioned air to provide heating and cooling of equipment or of personnel within the air conditioned area.

1.2 MAINTENANCE FORMS. RECORDS AND REPORTS. Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DAPAM738-750. The Army Maintenance Management System (TAMMS).

Maintenance forms and records used by the Marine Corps personnel are prescribed in TM 4700-15/1.

1.3 DESTRUCTION OF ARMY MATERIAL TO PREVENT EMEMY USE. Command decisions, according to the tactical situation, will determine when destruction of the air conditioner 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 (Mobility Equipment Command).

1.4 PREPARATION FOR STORAGE OF SHIPMENT.

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

1.4.2 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 (MWOs) should be applied.

1.4.3 Storage Site Selection. Inside storage is preferred for items selected for administrative storage. If inside storage is not available, trusks, vans, conex containers or other containers may be used.

1.5 HAND RECEIPT MANUAL. Hand receipts for the End Item/Components of End Item (COEI), Basic Issue Items (BII), and Additional Authorization List (AAL) items are published in a Hand Receipt Manual. The Hand Receipt Manual's numerical designation is the same as the related Technical Manual with the letters HR added to the number. These manuals are published to aid in property accountability and are available through

Commander
US Army Adjutant General Publication Center
ATTN: AGDL-OD
2800 Eastern Blvd.
Baltimore, MD 21220

Not applicable to the Marine Corps. Refer to SL-1-3.

1.6 REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIRS). If your air conditioner needs improvement, let us know. Send us an EIR. You, the user, are the only who can tell us what you do not like about your equipped. Let us know why you do not 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

Commander
US Army Aviation and Troop Command
ATTN: AMSAT-I-MDO
4300 Goodfellow Blvd.
St. Louis, MO 63120-1798. We will sead you a reply.

Marine Corps -by NAVMC Form 10772 directy to
Commander
Code 850
Marine Corps Logistics Bases
814 Radford Blvd.
Albany, GA 31704-1128

Section II. EQUIPMENT DESCRIPTION AND DATA

1.7 EQUIPMENT CHARACTERISTICS, CAPABILITIES AND FEATURES.

1.7.1 Characteristics. The Keco Air Conditioner.

a. Cools air to a shelter,

b. Heats air to a shelter, and

c. Ventilates or circulates air in a shelter.

1.7.2 Capabilities and Features of Model F18H.

a. Cooling capacity on COOL, BTU/hour 18,000

b. Heating capacity on HIGH HEAT. BTU/hour 14,300

c. Heating capacity on LOW HEAT, BTU/hour. 7,500

d. Power Requirements:
- Voltage 230
- Phases . . . . . Single
- Frequency, Hertz 50/60
- Amperes, phase (maximum):
  - Cooling 23
  - Heating 40
- Watts, running (maximun):
  - Cooling 5,200
  - Heating. 4,400

e. Refrigerant type R-22

f. Amount of charge, pounds . . . . . 5-5 lbs (2.5 kg)

1.7.3 Capabilities and Features of Model F18H-3.

a. Cooling capacity on COOL, BTU/hour 18,000

b. Heating capacity on HIGH HEAT, BTU/hour 14,300

c. Heating on LOW HEAT, BTU/hour 7,500

d. Power Requipments:
Voltage 208
Phases 3
Frequency, Hertz 50/60
Amperes, each phase (maximum):
Cooling 16
Heating 15
Watts, running (maximum):
Cooling 5,000
Heating 4,400

e. Refrigerant type R-22

f. Amount of change, pounds . . . . . 5.5 lbs (2.5 kg)

1.7.4 Capabilities and Features of Models K1F-18H-4 and MHP-20-4-08.

a. Cooling capacity on COOL, BTU/hour 18,000

b. Heating capacity on HIGH HEAT, BTU/hour 14,300

c. Heating capacity on LOW HEAT, BTU/hour 7,500

d. Power Requirements:
Voltage 208
Phases 3
Frequency, Hertz 400
Amperes,each phase (maximum):
Cooling 26.4
Heating 15
Watts, running (maximum):
Cooling 6,500
Heating 5,200

e. Refrigerant type R-22

f. Amount of change, pounds . . . . . 5.5 lbs (2.5 kg

1.7.5 Operating Tempertures. The air conditioners are capable of functioning as follows.

a. Start, operate, and cycle on cooling mode up to plus 120°F(49°C) ambient temperature, with air up to plus 120°F (49°C) entering the evaporator and condenser.

b. Operate on cooling mode without forming frost or ice on the evaporator at 55°F (12°C) ambient temperature, with air at plus 67°F (19°C) dry bulb and plus57°F (14°C) wet bulb entering the evaporator.