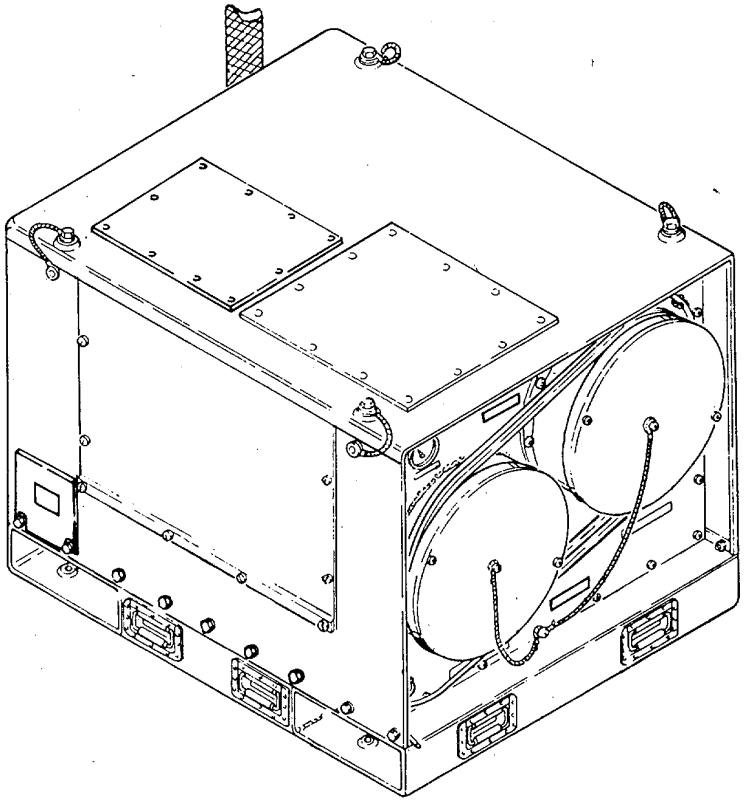
OPERATOR'S, UNIT, INTERMEDIATE DIRECT SUPPORT AND INTERMEDIATE GENERAL SUPPORT MAINTENANCE

HEATER, DUCT TYPE, PORTABLE, HDU-36/E, 120,000 BTU, MODEL H82



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HEADQUARTERS, DEPARTMENT OF THE ARMY
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5 AUGUST 1988

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TECHNICAL MANUAL

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OPERATOR'S UNIT, INTERMEDIATE DIRECT SUPPORT AND INTERMEDIATE GENERAL SUPPORT MAINTENANCE MANUAL FOR HEATER, DUCT TYPE, PORTABLE, HDU-36/E, 120,000 BTU MODELS H82, NSN 4520-01-254-8548, AND H83, NSN 4520-01-332-2394

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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 these 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. You may also submit your recommended changes by E-mail directly to <mpmt%avma28@st-louis-emh7.army.mil>. A reply will be furnished directly to you. Instructions for sending an electronic 2028 may be found at the back of this manual immediately preceding the hard copy 2028.

For Air Force, submit AFTO Form 22 (Technical Order System Publication Improvement Report and Reply) in accordance with paragraph 6-5, Section VI, TO. 00-5-1. Forward to Commander, San Antonio Air Logistics Center, ATTN: SA-ALC/ TIRTR, Kelly Air Force Base, TX 78241-5000.

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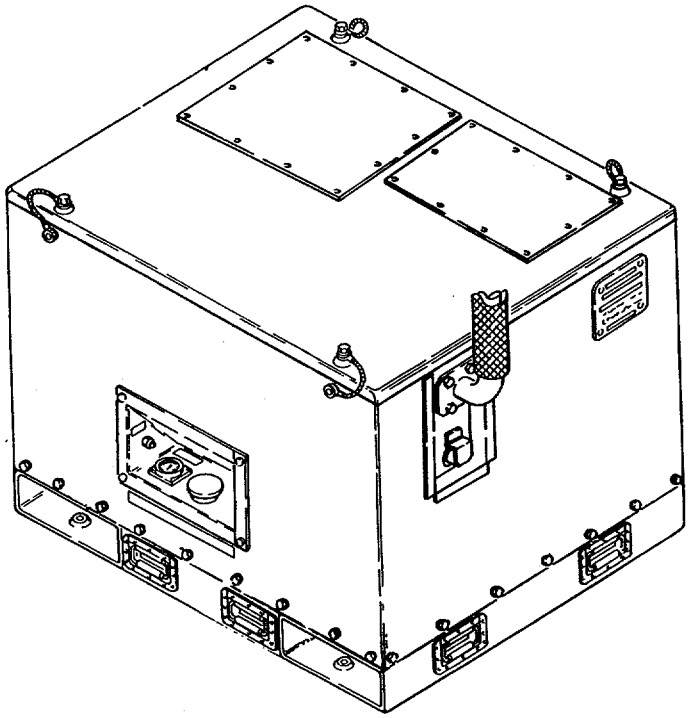
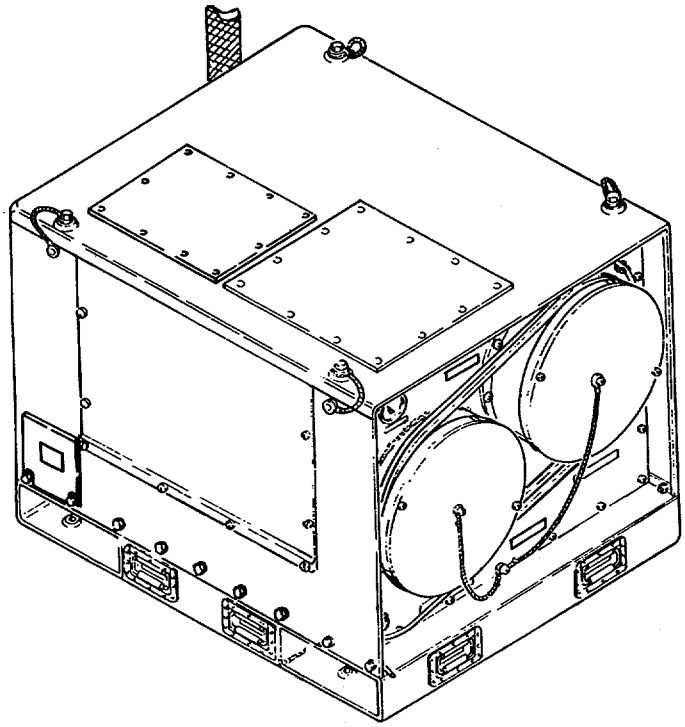


THREE QUARTER REAR VIEW



THREE QUARTER FRONT VIEW

Figure 1-1. Heater, 120,000 BTU, Type HDU-36/E.

CHAPTER 1

INTRODUCTION

Section I. GENERAL INFORMATION

1-1. SCOPE.

a. Type of Manual. This manual is an Operator's, Unit, Intermediate Direct Support, and Intermediate General Support maintenance manual.

b. Model Number and Equipment Name. The official equipment name is the Heater, Duct Type, Portable, HDU-36/E, 120,000 BTU Models H82 and H83. Hereafter, it will be referred to as the heater unit.

c. Purpose of Equipment. Designed for heating and ventilating the transportable shelters used in the Bare Base Equipment System.

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.

1-3. DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE. Refer to TM 750- 244-3 for instructions covering the destruction of the heater unit to prevent enemy use.

1-4. PREPARATION FOR STORAGE OR SHIPMENT. For other storage requirements or for shipment instructions, refer to Chapter 3, Section VII. Administrative storage requirements will be in accordance with the following:

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.

1-4. PREPARATION FOR STORAGE OR SHIPMENT - continued.

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 may be used.

1-5. NOMENCLATURE CROSS REFERENCE LIST.

Common Name	Official Nomenclature
Centrifugal Fan	Blower Assembly
Fuel Gage	Liquid Level Gage
Heater unit	Heater, Duct Type Portable, HDU-36/E, 120,000 BTU, Models, H82 and H83
Hour Meter	Time Totalizing Meter
INTERNAL TANK/EXTERNAL	
Tank Selector	3-Way Ball Valve
OFF/VENT/HEAT Switch	Rotary Switch
ON/OFF Switch	Toggle Switch
Relay (K8)	Safety Switch Control Assembly

1-6. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR). If your heater unit 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. Put it on an SF 368 (Quality Deficiency Report). Mail it to us at: Commander, U.S. Army I Troop Support Command, ATTN: AMSTR-MOF, 4300 Goodfellow Blvd., St. Louis, MO 63120-1798 (Army). We'll send you a reply.

1-7. LIST OF ABBREVIATIONS.

ac	alternating current
Btu	British thermal unit
C	Degrees Celcius
cfm	cubic feet per minute
cm/m	cubic meters/minute
F.....	Degrees Fahrenheit
f	feet

1-7. LIST OF ABBREVIATIONS - continued.

Hz	Hertz
in	inch or inches
kg	kilograms
lb	pounds
m	meters
mm	millimeters
psi	pounds per square inch
rpm	revolutions per minute
S/N	serial number
Vac	Volts alternating current

Section II. EQUIPMENT DESCRIPTION AND DATA

1-8. EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES.

a. Characteristics.

(1) Portable

(2) Requires outside power source.

(3) Heats and ventilates shelters used in the Bare Base Equipment System.

(4) Rated at 120,000 Btu per hour.

b. Capabilities and Features.

(1) Can operate as either a heater or a fresh air ventilator.

(2) When operating as a heater, the heater unit can operate as either a recirculating or a fresh air heater.

(3) Draws fuel for heating purposes from either the internal fuel tank or an external fuel source.

(4) When operating as a heater, the heater unit can be operated unattended for up to 24 hours in ambient air temperatures ranging from -65 °F (-53°C) to + 70°F (+ 21 °C).

(5) When operating as a ventilator, the heater unit can be operated continuously in ambient air temperatures ranging from + 70°F (+ 21 °C) to + 125 F (+ 52°C).

1-9. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS.

a. Left and Front Side. (Refer to Figure 1-2).

(1) Supply Air Duct. The supply air duct (1) moves the hot air from the heater unit to the shelter.

(2) Return Air Duct. The return air duct (2) brings return air back to the heater unit for reheating.

(3) Instruction Plates. The instruction plates (3) provide instructions for the operation of the heater unit.

(4) Fresh Air Damper. The fresh air damper (4), when opened, allows fresh air to be drawn into the heater unit and used in the ventilating or fresh air heating mode.

(5) Control Panel. The control panel (5) contains the operator controls and indicators used during the operation of the heater unit.

(6) Return and Supply Air Dust Covers. The return and supply air dust covers (6) prevents dust and debris from entering the heater unit when the unit is not in operation.

(7) Power Cable. The power cable (7) is to be connected to a power source to operate the heater unit. Models H82 and H83 have different power cables.

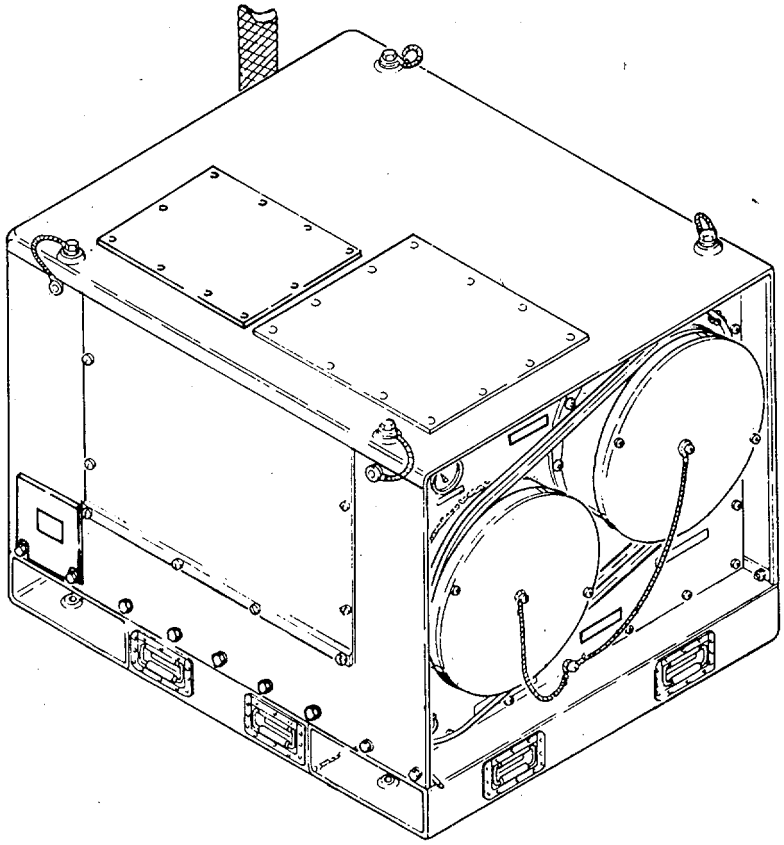


Figure 1-2. Heater Unit, Front and Left Side