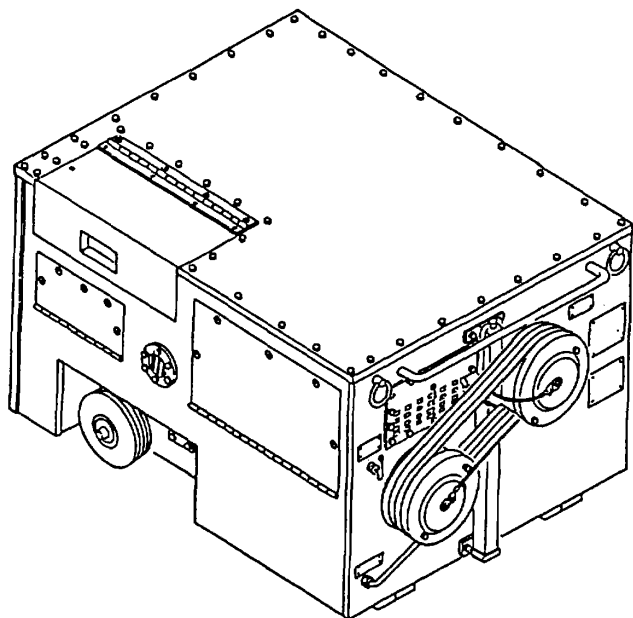


**TECHNICAL MANUAL
OPERATOR'S, UNIT,
DIRECT SUPPORT AND
GENERAL SUPPORT
MAINTENANCE MANUAL**



**ARMY SPACE HEATER (ASH),
ELECTRIC POWERED, MULTI-FUEL,
120,000 BTU,
MODEL H120
NSN 4520-01-367-2739
TM 9-4520-258-14**

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Distribution Statement A: Approved for public release; distribution is unlimited.

**OPERATOR'S, UNIT, DIRECT SUPPORT AND
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**ARMY SPACE HEATER (ASH),
ELECTRIC POWERED, MULTI-FUEL
120,000 BTU, MODEL H120, NSN 4520-01-367-2739**

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-louisemh7.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.

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HOW TO USE THIS MANUAL

Be sure to read all Warnings before using your equipment.

This manual contains instructions for operation and maintenance of the Army Space Heater (ASH).

MANUAL OVERVIEW

a. Index Tabs.

Notice the front cover index of this manual. It lists the most important areas of the manual and guides you to those sections. Follow the black mark on the cover index edge through the pages to the edge mark on the section you want. The subjects on the front cover index are also highlighted in the table of contents by boxes. A detailed alphabetical index is located at the back of this manual.

b. Contents.

The following gives you a summary of each chapter and appendix. Before beginning a maintenance task, you must familiarize yourself with the entire procedure.

- Chapter 1 Introduces you to the equipment and gives you information such as weight, dimensions, abbreviations used and information on how the unit works.
- Chapter 2 Provides information necessary to identify and use the equipment. Operating instructions in this chapter tell you how to use the equipment in both usual and unusual weather conditions.
- Chapter 3 Provides operator troubleshooting procedures for identifying equipment malfunctions and maintenance procedures for performing operator maintenance tasks.
- Chapter 4 Provides unit maintenance personnel with troubleshooting procedures for identifying equipment malfunctions and maintenance procedures for repairing defective equipment.
- Chapter 5 Provides direct support maintenance personnel with maintenance instructions for performing repairs on equipment as authorized by the maintenance allocation chart.
- Chapter 6 General support maintenance. There are no general support maintenance procedures required on this unit.
- Appendix A - Provides a list of frequently used forms and publications referenced or used in this manual.
- Appendix B The Maintenance Allocation Chart identifies repairable components and the maintenance level authorized to perform the repairs.
- Appendix C Lists components that are not mounted on the equipment, but are required to make the unit functional.

HOW TO USE THIS MANUAL continued

- Appendix D Lists additional equipment authorized for your unit for use with the Army Space Heater.
- Appendix E Provides you with information about expendable supplies such as sealants, lubricants, chemicals, etc., that are used when operating or maintaining equipment.
- Appendix F Provides a list of items and instructions on how to make certain tools and devices required to perform some of the maintenance tasks contained in this manual.
- Appendix G Provides you with general torque values for common hardware.
- Appendix H Provides a list of parts that must be replaced during maintenance of the equipment.
- Glossary Lists terms and abbreviations used in this manual and their definitions.
- Index Lists subject matter contained in manual in alphabetical order.

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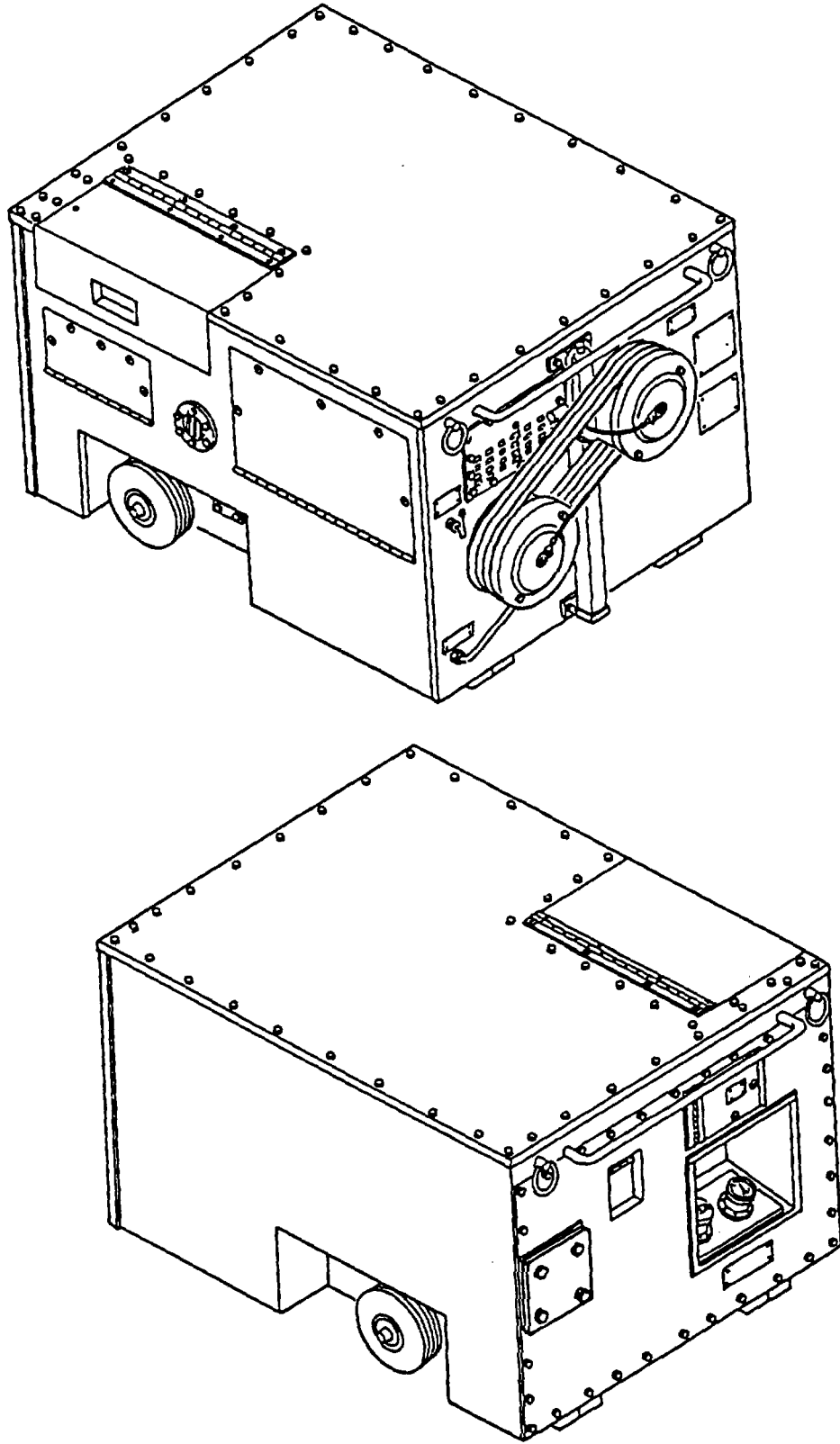


Figure 1-1. Army Space Heater, Model H120

CHAPTER 1

INTRODUCTION

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Section I. GENERAL INFORMATION

1-1. SCOPE.

This manual is for use by personnel responsible for the operation and maintenance of the Army Space Heater.

- a. Type of Manual. This is an Operator's, Unit, Direct Support, and General Support Maintenance Manual.
- b. Equipment Name and Model Number. The official equipment name is Army Space Heater (ASH), Electric Powered, Multi-fuel, 120,000 BTU Model H120. Hereafter, it will be referred to as the ASH unit.
- c. Purpose of Equipment. Designed for heating and ventilating fixed and transportable shelters.

1-2. MAINTENANCE FORMS, RECORDS AND REPORTS.

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA Pam 738-750, The Army Maintenance Management Systems (TAMMS).

1-3. CORROSION PREVENTION AND CONTROL (CPC).

- a. Corrosion Prevention and Control (CPC) of Army materiel is a continuing concern. It is important that any corrosion problems with this item be reported so that the problem can be corrected and improvements made to prevent the problem in future items.
- b. While corrosion is typically associated with rusting of metals, it can also include deterioration of other materials, such as rubber and plastic. Unusual cracking, softening, swelling or breaking of the materials may be a corrosion problem.
- c. If a corrosion problem is identified, it can be reported using Standard Form 368, Product Quality Deficiency Report. Using key words such as "rust", "deterioration", or "cracking" will ensure that the information is identified as a CPC problem. The form should be submitted to the address specified in DA PAM 738-750.

1-4. DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE.

Instructions for destruction of the equipment to prevent enemy use are in TM 750-244-3.

1-5. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATION (EIR).

If your ASH 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 an SF 368 (Product Quality Deficiency Report). Mail it to us at: Commander, U.S. Army Aviation and Troop Command, ATTN: AMSAT-I-MDO, 4300 Goodfellow Boulevard, St. Louis, MO 63120-1798. We will send you a reply.

1-6. NOMENCLATURE CROSS REFERENCE LIST.

Common Name	Official Nomenclature
ASH Unit	Army Space Heater

1-7. LIST OF ABBREVIATIONS. Refer to glossary.

Section II. EQUIPMENT DESCRIPTION

1-8. EQUIPMENT CHARACTERISTICS, CAPABILITIES AND FEATURES.

a. Characteristics

- (1) Portable.
- (2) Heats and ventilates shelters, vans and other enclosed areas.
- (3) Adjustable air damper.
- (4) Positive pressurized enclosure.
- (5) Quiet operation, less than 60 Dba.
- (6) Remote thermostat control.
- (7) Retractable wheels.
- (8) Rated at 120,000 BTU per hour.
- (9) Requires 120 vac / 50-60 hz power source.

b. Capabilities

- (1) Can operate as either a heater or fresh air ventilator.
- (2) In the heat mode, unit can operate as either a recirculation or fresh air heater.
- (3) Can operate up to 14 hours, unattended on a 14 gallon internal fuel tank.
- (4) Operation can be extended beyond 14 hours when used in the external fuel supply mode.
- (5) Operates as a heater in an ambient temperature range of -40° to 65°F.
- (6) Operates as a ventilator up to 100°F.
- (7) Can be moved by one person when the wheels are extended.
- (8) Skids are provided for mobility on ice and snow.
- (9) The quiet operation allows use in areas where personnel work or sleep.
- (10) Unit is suitable for hardening for use in nuclear, biological and chemical environments.

1-9. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS.

- a. Front and Right Side. (Refer to Figure 1-2)
- (1) Supply Air Duct. The supply air duct (1) moves hot air from the ASH to the shelter.
 - (2) Supply Air Outlet. The supply air outlet (2) provides support to attach the supply air duct.
 - (3) Return Air Duct. The return air duct (3) brings return air back to the ASH for reheating.
 - (4) Return Air Inlet. The return air inlet (4) provides support to attach the return air duct.
 - (5) Fresh Air Damper. The fresh air damper (5), when open, allows fresh air to be drawn into the ASH. It can be used in the ventilating or heating mode.
 - (6) Return And Supply Air Duct Covers. The return and supply air duct covers (6) prevent dust and debris from entering the ASH when not in operation or in storage.
 - (7) Power Cable. The power cable (7) is to be connected to a power source to operate the ASH.
 - (8) Remote Thermostat Receptacle. The remote thermostat receptacle (8) provides a receptacle for attaching the remote thermostat cable.
 - (9) Remote Thermostat and Cable. The remote thermostat and cable (9) controls temperature from inside the heated area.
 - (10) Lubrication Chart. The lubrication chart (10) provides information for proper lubrication of the ASH.
 - (11) Jack Assembly. The jack assembly (11) is used to raise the ASH to allow the wheels to be extended or retracted and to level the ASH.
 - (12) Front Side Access Door. The front side access door (12) provides access to the ASH interior for inspections/maintenance, the handbook compartment, the exhaust elbow, and fuel hose.
 - (13) Rear Side Access Door. The rear side access door (13) provides access to the ASH interior for inspections/maintenance and the remote thermostat.
 - (14) Combustion Air Inlet. The combustion air inlet (14) brings air into the combustor blower assembly.
 - (15) Retractable Wheel Assembly (right side). The retractable wheel assembly (15) allows an individual to move and position the ASH when used in conjunction with the left side wheel assembly.
 - (16) Control Panel Cover. The control panel cover (16) protects the control panel.
 - (17) Control Panel. The control panel (17) contains the operator controls and indicators used during operation. The hinged panel provides a central location for troubleshooting the ASH electrical components/controls.

1-9. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS - continued.

- (18) Instruction Plate. The instruction plate (18) shows the electrical and fuel schematics and provides instructions for operating the ASH.
- (19) Combustion Air Inlet Cover. The combustion air inlet cover (19) keeps dust and debris from entering the ASH when not in operation or in storage.
- (20) Lead Assembly. The lead assembly (20) adapts the ASH power cable to a 120 vac single phase screw terminal supply.

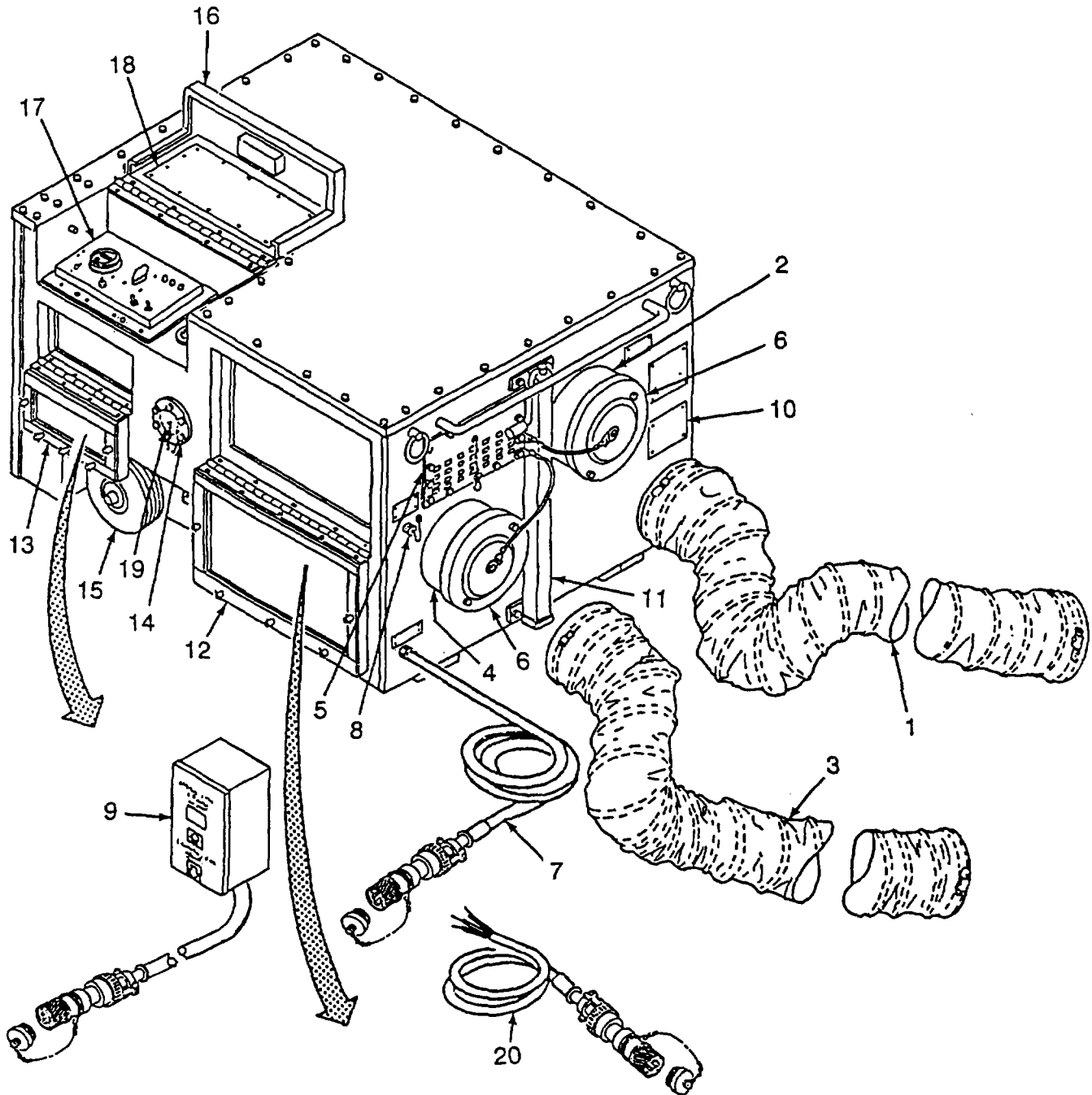


Figure 1-2. Major Components, Front and Right Side
1-5