DEPARTMENT OF THE ARMY TECHNICAL MANUAL

TECHNICAL MANUAL

OPERATOR, ORGANIZATIONAL AND DIRECT SUPPORT MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST

HEATER, SPACE, OIL FIRED: 70,000 BTU, W/ CIRCULATING FAN

(PREWAY INC. MODEL 444-3A) FSN 4520-930-4991;
(PREWAY INC. MODEL 444-3ABJ) FSN 4520-930-4992;
(PREWAY INC. MODEL 444-2-ABEX) FSN 4520-912-3871;
(PREWAY INC. MODEL 444-4-ABJ) FSN 4520-176-4305;
(MONTAG MODEL SH-70B) FSN 4520-863-2172,
W/O CIRCULATING FAN OR ROOF JACK;
(PREWAY INC. MODEL 444-4A) FSN 4520-143-9482;
HEATER SPACE, OIL FIRED 50,000 BTU, W/ CIRCULATING FAN
(PREWAY INC. MODEL 441-4ABJ) FSN 4520-116-6836

This copy is a reprint which includes current pages from Changes 1 through 3.

HEADQUARTERS, DEPARTMENT OF THE ARMY

FEBRUARY 1972

WARNING
DO NOT USE GASOLINE OR JP-4 AS FUEL.
Use only a non-adjustable type draft regulator with this heater installation.

SAFETY PRECAUTIONS

BEFORE OPERATION

Be sure heater is properly installed and attached to a flue before operating.
Do not light heater, if installation is questionable.
Do not operate heater with leaky connections.
Use only specified fuel oil free from dirt and water.
Do not kink siphon tube.
Be sure that burner rings and low fire rings are in place before lighting heater.
Keep a fire extinguisher near equipment.
Be sure wick is in serviceable condition.

DURING OPERATION

Do not re-light heater while it is hot.
When changing or filling fuel cans, always put siphon in drain trough.
Wipe all spilled fuel up immediately.
Do not tamper with, try to adjust, or disassemble oil control valve.
Do not add weights or alter draft regulator.
Do not fill fuel can while tank is attached to heater
Do not fasten reset lever on oil control in any position.
Do not use heater for an incinerator.

AFTER OPERATION

Do not re-light heater while it is hot. Allow 30 minutes to cool.

CHANGE }
NO. 3

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 3JULY 1992

Operator, Organizational and Direct Support Maintenance Manual Including Repair Parts and Special Tools List

HEATER, SPACE, OIL FIRED: 70,000 BTU,
W/CIRCULATING FAN (PREWAY INC. MODEL 444-3A)
FSN 4520-930-4991;
(PREWAY INC. MODEL 444-3ABJ) FSN 4520-930-4992;
(PREWAY INC. MODEL 444-2-ABEX) FSN 4520-912-3871;
(PREWAY INC. MODEL 444-4-ABJ) FSN 4520-176-4305;
(MONTAG MODEL SH-70B) FSN 4520-863-2172;
W/O CIRCULATING FAN OR ROOF JACK:
(PREWAY INC. MODEL 444-4A) FSN 4520-143-9482;
(PREWAY INC. MODEL 444-5A) FSN 4520-540-0557;
HEATER SPACE, OIL FIRED: 50,000 BTU
W/CIRCULATING FAN (PREWAY INC. MODEL 441-4ABJ)
FSN 4520-116-6836

Approved for public release; distribution is unlimited.

Current as of 19 June 1974

TM 5-4520-235-13, 15 February 1972, is changed as follows:

Page 1-4, Paragraph 1-8.b.(16) is superseded as follows:

(16) *Fuel.* Diesel, grades DF-A, DF-1 and DF-2 in accordance with VV-F-800. Aircraft turbine fuel JP-8 in accordance with MIL-T-83133C.

Retain this sheet in front of manual for reference purposes.

By Order of the Secretary of the Army:

GORDON R.SULLIVAN
General, United States Army
Chief of Staff

Official:

MILTON H. HAMILTON
Administrative Assistant to the
Secretary of the Army
01841

DISTRIBUTION:
To be distributed in accordance with DA Form 12-25E, qty rqr block no. 1000.

Changes in force: C1 And C2

TM 5-4520-235-13
C 2

Change No. 2

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, D.C.,*26 August 1974*

Operator, Organizational and Direct Support Maintenance Manual Including Repair Parts and Special Tools List

HEATER, SPACE, OIL FIRED: 70,000 BTU, W/CIRCULATING FAN (PREWAY INC. MODEL 444-3A) FSN 4520-930-4991; (PREWAY INC. MODEL 444-3ABJ) FSN 4520-930-4992 (PREWAY INC. MODEL 444-2-ABEX) FSN 4520-912-3871; (PREWAY INC. MODEL 4444-ABJ) FSN 4520-176-4305; (MONTAG MODEL SH-70B) FSN 4520-863-2172; W/O CIRCULATNG FAN OR ROOF JACK: (PREWAY INC. MODEL 4444A) FSN 4520-143-9482; (PREWAY INC. MODEL 4-5A) FSN 4520-540-0557; HEATER SPACE, OIL FIRED: 50,000 BTU, WIIRCULATING FAN (PREWAY INC. MODEL 441-4ABJ) FSN 4520-116-6836

Current as of 19 June 1974

TM 5-4520-235-13, 15 February 1972, is changed as follows:
The title is changed as shown above.
Page 1-1. Paragraph 1-3 is superseded as follows:

1-3. Recommendation for Maintenance Publications Improvements. You can help to improve this manual by calling attention to errors and by recommending improvements. Your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms) should be mailed direct to Commander, US Army Troop Support Command, ATTN: AMSTS-MPP, 4300 Goodfellow Boulevard, St. Louis, MO. 63120. A reply will be furnished direct to you.
Page 1-1, paragraph 1-7. In line 12, "Models 444-3A and 444-4A" is changed to read: "Models 444-3A, 444-4A and 444-5A".
Page 1-4, paragraph 1-8b. After paragraph (2), paragraph (2.1) is added as follows:

(2.1) Space heater (Model 444-5A).

Rating..... 70,000 BTUH
Manufacturer ..... Preway, Inc.
FSN.....4520-540-0557
Contract No .....DSA 700-73-O-5739

Page C-6. The following is added in the appropriate column below "Group 03": Column 1, "PO": Column 2, "4520-403-0822"; Column 3, "Pot Assembly, Burner, 13208E6192-2 (97403)"; Column 4, "EA"; and Column 5,"1".

Page C-11. The following is added in the appropriate column below "Group 03": Column 1, "PO": Column 2, "4520-403-0822"; Column 3, "Pot Assembly, Burner, 13208E6192-2 (97403)"; Column 4, "EA"; and Column 5,"1".

All changes, additions and/or deletions of Federal stock numbers or manufacturer's part numbers will be appropriately reflected in the parts listing and Section viii of this manual.

By Order of the Secretary of the Army:

CREIGHTON W. ABRAMS
General, United States Army
Chief of Staff

Official:

VERNE L. BOWERS
Major General, United States Army
The Adjutant General

Distribution:

To be distributed in accordance with DA Form 12-25C (qty rqr block No. 586), Organizational maintenance requirements for Heater Space 50,000 BTU.

887-322

Change
No. 1

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, D.C., *8 June 1972*

Operator, Organizational and Direct Support Maintenance Manual Including Repair Parts and Special Tools List

HEATER, SPACE, OIL FIRED: 70,000 BTU, W/CIRCULATING FAN (PREWAY INC. MODEL 444-3A) FSN 4520-930-4991; (PREWAY INC. MODEL 444-3ABJ) FSN 4520-930-4992; (PREWAY INC. MODEL 444-2-ABEX) FSN 4520-912-3871; (PREWAY INC. MODEL 444-4-ABJ) FSN 4520-176-4305; {AONTAG MODEL SH-70B) FSN 4520-863-2172 W/O CIRCULATING FAN OR ROOF JACK: (PREWAY INC. MODEL 444-4A) FSN 4520-143-9482; HEATER SPACE, OIL FRIED 50,000 BTU, W/CIRCULATING FAN (PREWAY INC. MODEL 441-4ABJ) FSN 4520-116-6836

TM 5-4520-235-13, 15 February 1972 is changed as follows:

Page ii. Table of contents for Appendix C, is superseded as follows:

Page C-1. Change title for Appendix C as follows:

APPENDIX C

BASIC ISSUE ITEMS LIST AND ITEMS TROOP

INSTALLED OR AUTHORIZED LIST AND REPAIR

PARTS AND SPECIAL TOOLS LIST

Page C-1. Paragraph C-1. Scope is superseded as follows:

C-1. Scope

This appendix lists basic issue items, items troop installed or authorized, repair parts, special tools, test and support equipment required for performance of operator, organizational, and direct support maintenance of the heater.

Page C-1. Paragraph C-2. General is superseded as follows:

C-2. General

This Basic Issue Items, Items Troop Installed or Authorized, Repair Parts, and Special Tools List is divided into the following sections:

a. Basic Issue Items-List-Section II. "Not Applicable".

b. Items Troop Installed or Authorized List Section III. A list, in alphabetical sequence, of items which, at the discretion of the unit commander, may accompany the end item, but are NOT subject to be turned in with the end item.

c. Repair Parts List-Section IV. A list of repair parts authorized for performance of maintenance at the organizational level in figure and item number sequence.

d. Special Tools, Test and Support Equipment-Section V. "Not Applicable".

e. Repair Parts-Section VI. A list of repair parts authorized for performance of maintenance at the direct support level in figure and item number sequence.

f. Special Tools, Test and Support Equipment-Section VII. "Not Applicable".

g. Federal Stock Numbers and Reference Number index-Section VIII. A list of federal stock numbers in ascending numerical sequence. Followed by a list of reference numbers appearing in all of the listings, in alpha-numeric sequence, cross referenced to the illustration figure numbers and item number.

NOTE

Items not illustrated are cross-referenced to assembly group number.

Page C-1. Explanation of Paragraph C3 is changed to read as follows:

C-3. Explanation of Columns

The following provides an explanation of columns formed in the tabular listings.

Page C-1. Paragraph C-3a(2) is superseded as follows:

(2) Maintenance Code. Indicates the lowest category of maintenance authorized to install the listed item. The maintenance codes are:

Code	*Explanation*
C-------	Crew/Operator
O-------	Organizational Maintenance
F-------	Direct Support Maintenance

Page C-2. Immediately following paragraph 3-C*d* add paragraph *d*1 and *d*2.

d1. Quantity Furnished With Equipment (Basic Issue Items Only). "Not Applicable".

d2. Quantity Authorized (Items Troop Installed or Authorized Only). Indicates the quantity of the item authorized to be used with the equipment. Immediately following Page C-3, add Page C-3.1.

Section III. ITEMS TROOP INSTALLED OR AUTHORIZED LIST

(1) SMR Code	(2) Federal stock No.	(3) Description Ref No. & Mfr. Code Usable on Code	(4) Unit of Mess	(5) Qty Auth
PC	7520-559-9618	CASE, MAINTENANCE AND OPERATIONAL MANUAL	EA	1
PC	7240-222-3088	CAN, GASOLINE	EA	1

Page C-4. Line 1. **Change SECTION II To SECTION IV as follows:**

SECTION IV - REPAIR PARTS FOR ORGANIZATIONAL MAINTENANCE

Page C-9. Line 1. **Change SECTION IV to SECTION VI as follows:**

SECTION VI - REPAIR PARTS FOR DIRECT SUPPORT MAINTENANCE

Page C-22 and C-23 Line 1. **Change Section VI to Section VIII as follows:**

SECTION VIII. INDEX-FEDERAL STOCK NUMBER AND REFERENCE NUMBER CROSS-REFERENCE TO FIGURE AND ITEM NUMBER.

By Order of the Secretary of the Army:

W.C. WESTMORELAND,
General, United States Army,
Chief of Staff

Official:
VERNE L. BOWERS,
Major General, United states Army,
The Adjutant General.

Distribution:

To be distributed in accordance with DA Form, 12-25C, Organizational maintenance requirements for Heaters, Space: 50,000 and 60,000 BTU.

TECHNICAL MANUAL
No. 5-4520-235-13

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, D.C., *15 February 1972*

OPERATOR, ORGANIZATIONAL AND DIRECT

SUPPORT MAINTENANCE MANUAL INCLUDING REPAIR

PARTS AND SPECIAL TOOLS LIST

HEATER, SPACE, OIL FIRED: 70,000 BTU, W/ CIRCULATING

FAN(PREWAY INC. MODEL 444-3A) FSN 4520-930-4991;

(PREWAY INC. MODEL 444-3ABJ) FSN 4520-930-4992;

(PREWAY INC. MODEL 444-2-ABEX) FSN 4520-912-3871;

(PREWAY INC. MODEL 444-4-ABJ) FSN 4520-176-4305;

(MONTAG MODEL SH-70B) FSN 4520-863-2172,

W/O CIRCULATING FAN OR ROOF JACK:

(PREWAY INC. MODEL 444-4A) FSN 4520-143-9482;

HEATER SPACE, OIL FIRED 50,000 BTU,

W/ CIRCULATING FAN (PREWAY INC. MODEL 441-4ABJ)

FSN 4520-116-6836

Current as of 28 January 1972

*This manual supersedes TM 5-4520-226-13, 13 February 1968 including C1, 28 May 1969; and C2, 14 April 1970; and TM 5-4520-235-13, 21 October 1969 including C1, 18 August 1970.

LIST OF ILLUSTRATIONS

CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. Scope

This manual is for your use in operating and maintaining Space Heaters, Preway Inc. Models 444-3-A, 444-3-ABJ, 444-2ABEX, 444-4A, 441-4ABJ, 444-4ABJ, and Montag Model SH-70B.

1-2. Maintenance Forms and Records

Maintenance forms and records that you are required to use are explained in TM 38-750.

1-3. Reporting of Errors

You can improve this manual by calling attention to errors and by recommending improvements, using DA Form 2028 (Recommended Changes to Publications}, or by a letter, and mail directly to Commanding General, U.S. Army Mobility Equipment Command, ATTN: AMSME-MPP, 4300 Goodfellow Boulevard, St. Louis, Mo.63120. A reply will be furnished directly to you.

1-4. Equipment Serviceability Criteria (ESC)

This equipment is not covered by an ESC.

1-5. Destruction of Army Materiel to Prevent Enemy Use

For information pertaining to the destruction of this equipment to prevent enemy use, refer to TM 750-244-3.

1-6. Administrative Storage

For information relative to the administrative storage of this equipment, refer to TM 740-90-1.

Section II. DESCRIPTION AND DATA

1-7. Description

a. General. The Preway Models 444-3-ABJ, 444-2-ABEX, 444-4A, 444-4ABJ and Montag Model SH-70B Space Heaters (fig. 1-1 and 1-2) are fuel oil burning, non-electric, high radiant type heaters having an output capacity of 70,000 British Thermal Units (BTU) per hour. Preway Model 441-4ABJ has an output capacity of 50,000 BTU per hour. These space heater models are supplied complete with stove pipe, T-joint, draft regulator, adjustable pitch roof jack assembly, circulating fan, and are designed for floor installation. Preway basic unit) Models 444-3A and 444-4A space heaters come equipped without air circulating fan and adjustable pitch roof jack. This basic stove unit is interchangeable with the above mentioned models.

b. Fuel System. Fuel oil is supplied to the control valve from a standard military rectangular 5 gallon fuel can, which is hung on the left side of the heater frame. A siphon starts the fuel flowing from the can to the control valve. The fuel can is easily removed, permitting uninterrupted burner operation during fuel can servicing.

c. Combustion Chamber. The combustion chamber consists of a metal drum surrounded by a perforated metal guard and is mounted on a metal base. The burner is a vaporizing pot type which vaporizes the oil, mixing it with the combustion air. Combustion air is drawn into the drum through an opening in the bottom.

d. Controls. The fuel control valve is of the manually adjusted type. Fuel burning can be varied from a low pilot flame to maximum output.

e. Circulating Fan. A 650 CFM fan is attached to the lower end of the ventilator tube of the roof jack to improve warm air distribution and for summer ventilation. The fan motor is a sealed bearing type requiring no lubrication.

f. Roof Jack Assembly. The roof jack assembly serves both as an exhaust for the heater flue gases, and as a ventilator for the building. The lower end of the ventilator tube is equipped with an adjustable damper which controls the amount of air passing up the tube.

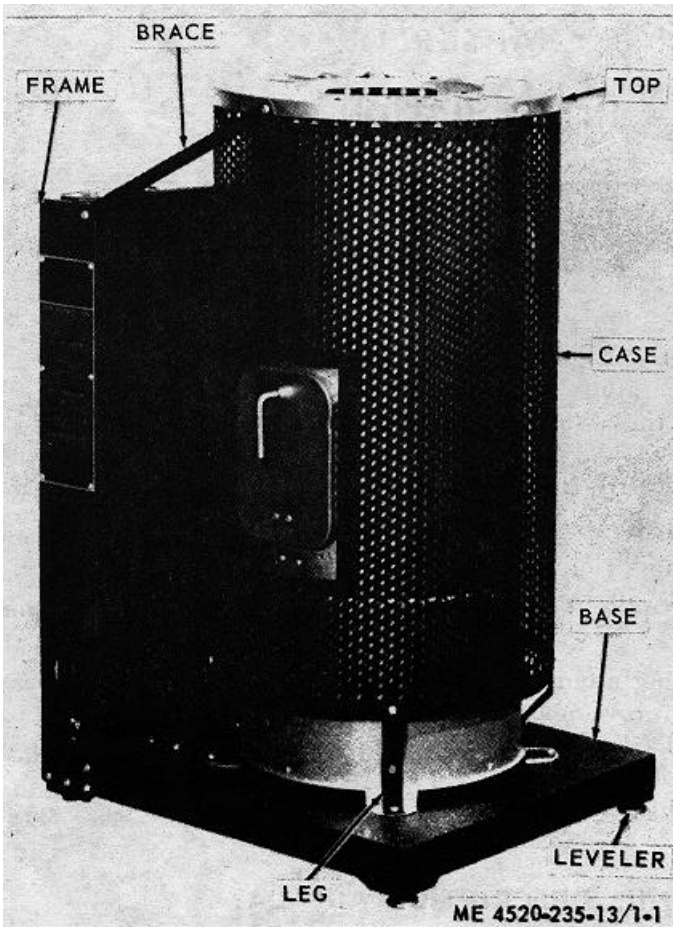


Figure 1-1. Space heater.

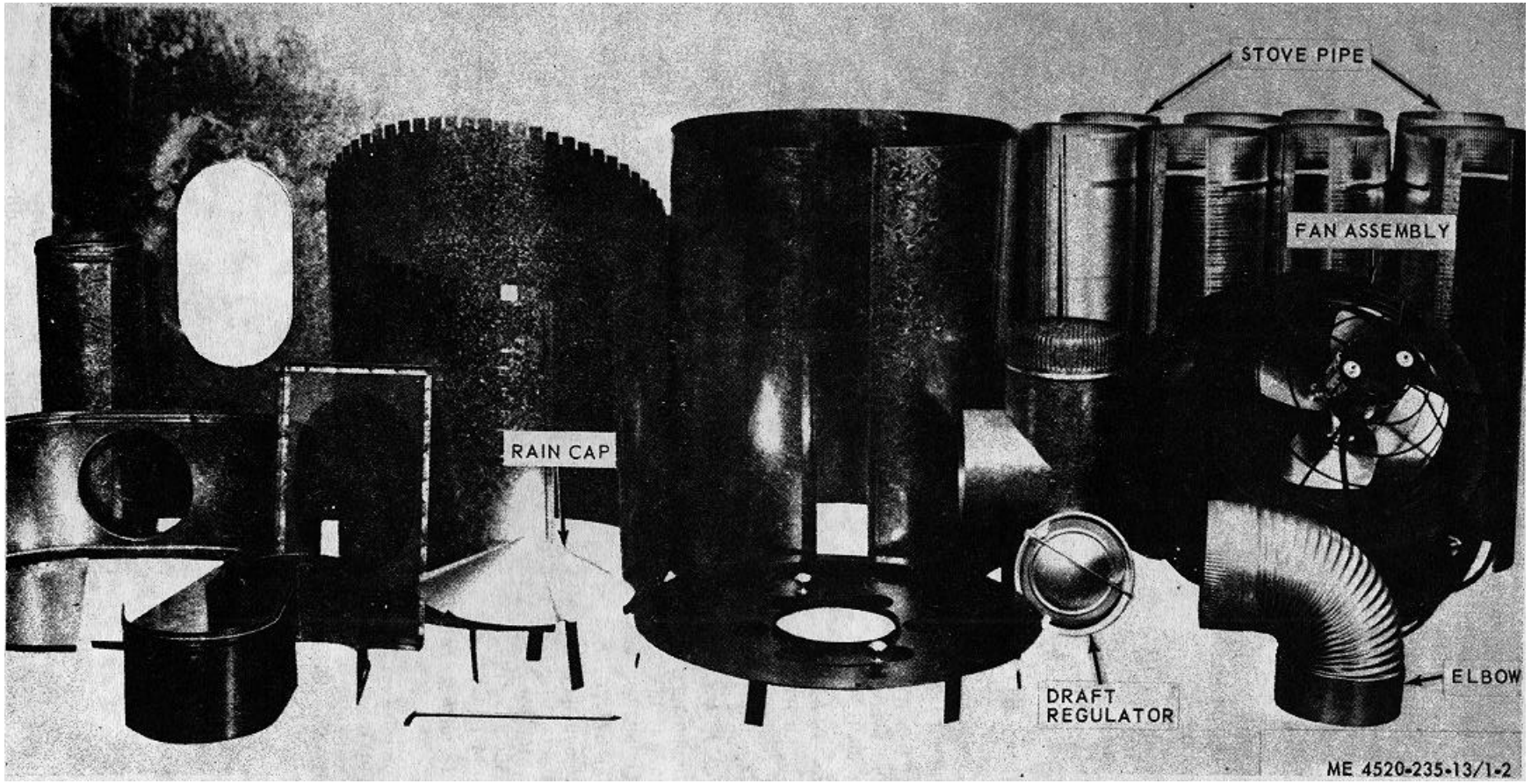


Figure 1-2. Roof jack assembly, stove pipe, draft regulator, circulating fan, parts packed with space heater.

1-8. Tabulated Data

a. Identification Plates. The heater units have one major identification plate. The plate is located on the left side of the heater frame. Information is given on the federal stock number, manufacturer, model number, contract number and capacities.

b. Tabulated Data.

(1) Space heater (Model 441-4ABJ).
Rating ..... .50,000 BTUH
Manufacturer ..... Preway Inc.
FSN 4520-116-6836
Contract No..... DSA 68-CB529

(2) Space heater (Model 444-4A).
Rating ..... 70,000 BTUH
Manufacturer..... Preway Inc.
FSN 4520-143-9482
Contract No..... DSA-700-69-C-2909

(3) Space heater (Model 444-4ABJ).
Rating ..... 70,000 BTUH
Manufacturer..... Preway Inc.
FSN 4520-176-4305

(4) Space heater (Model 444-2-ABEX).
Rating ..... 70,000 BTUH
Manufacturer..... Preway Inc.
FSN 4520-912-3871

(5) Space heater (Model 444-3A).
Rating ..... 70,000 BTUII
Manufacturer..... Preway Inc.
FSN 4520-930-4991

(6) Space heater (Model 444-3ABJ).
Rating ..... 70,000 BTUH
Manufacturer..... Preway Inc.
FSN 4520-930-4992

(7) Space heater (Model SH-70B).
Rating ..... 70,000 BTUH
Manufacturer..... Montag Div. of Pioneer Mfg. Co.
FSN 4520-863-2172
Contract No..... DSA-7-15767

(8) Fuel control (used with Model 441-4ABJ).
Manufacturer..... Controls Corp. of America
Model..... 340YR
Type..... Float valve
Rating ..... High flow 39cc/ min., Low flow 8 cc/min.

(9) Fuel control (used with Model 444-4A).
Manufacturer ..... Controls Corp of America
Model..... 340YR-80541
Type..... Float valve
Rating ..... High flow 45 cc / min Low flow 6 cc/min.

(10) Fuel control.
Manufacturer ..... Detroit Controls Corp
M4idel ..... Spec. CRC-239
T-pe ..... Float valve
Rating ..... High flow 45 cc / min., Low flow 12 cc/ min.,

(11) Dimensions and shipping weight (Model 441-4ABJ).
Length..... 32 7/8 inches
Width ..... 29 7/8 inches
Height ..... 40¼ inches
Weight ..... .235 pounds
Size ..... 22 cubic feet

NOTE
Weight and size include roofjack and fan.

(12) *Dimensions and shipping weight (Model 444-4A).*
Length..... 29 inches
Width ..... 32 inches
Height ..... 41 inches
Weight ..... 181 pounds
Size ..... 22 cubic feet

(13) *Dimensions and shipping weight (Model 444-4ABJ).*
Length..... 30 inches
Width ..... 30 inches
Height ..... 55 inches
Weight ..... 269 pounds
Size ..... 28.6 cubic feet

(14) *Dimensions and shipping weight*.
Length..... 12 7 / 8 inches
Width ..... 2-3 7 / 8 inches
Height ..... 40¼ inches
Weight ..... 205 pounds
Size ..... .22 cubic feet

(15) *Capacities*. Fuel is furnished from a standard military 5 gallon can.

(16) *Fuel*. Diesel, grades DF-A, DF-1 and DF-2 in accordance with VV-F-800.

(17) *Heat output control*. Manual, by-float type fuel valve (non-electric).

(18) *Fan motor (used with Model 441-4ABJ).*
Manufacturer..... Redmon Co.
Type..... AK4
Model..... AK4L113A
Voltage ..... 115 volts
Amperage ..... 1.77 amperes
Frequency..... 60 hertz
RPM..... 1550
Duty ..... Continuous

(19) Fan motor (used with Model 444-4ABJ).
Manufacturer..... Fasco
Type..... Continuous duty
Part No. 7163-1879
Rating ..... 115 v; 60 hertz; 1.55 amps; single phase; 1550 rpm.
Rotation ..... CW from shaft end
Horsepower..... 1/20

(20) Fan assembly.
Manufacturer (Model SH-70B) Fasco
Type (fan) ..... 4 blades, 10" dia., axial with vane hub.

Part No. ..... Type V6
Motor rating..... 115 v; 60 hertz ac, single phase, 1750 rpm
Rotation ..... CCW with hub on exhaust side
Manufacturer..... Redmon Co.

Type (fan) ..... 4 blades, 10” dia., axial vane hub
Part No. AK4L125A
Motor rating..... 115 v; 60 hertz ac; single phase, 1750 rpm.
Rotation ..... CCW with hub on exhaust side

CHAPTER 2

OPERATING INSTRUCTIONS

WARNING

If equipment to operate refer to if equipment fails to operate refer to troubleshooting procedures in chapter 3.

Section I. OPERATING PRECEDURES

2-1. General

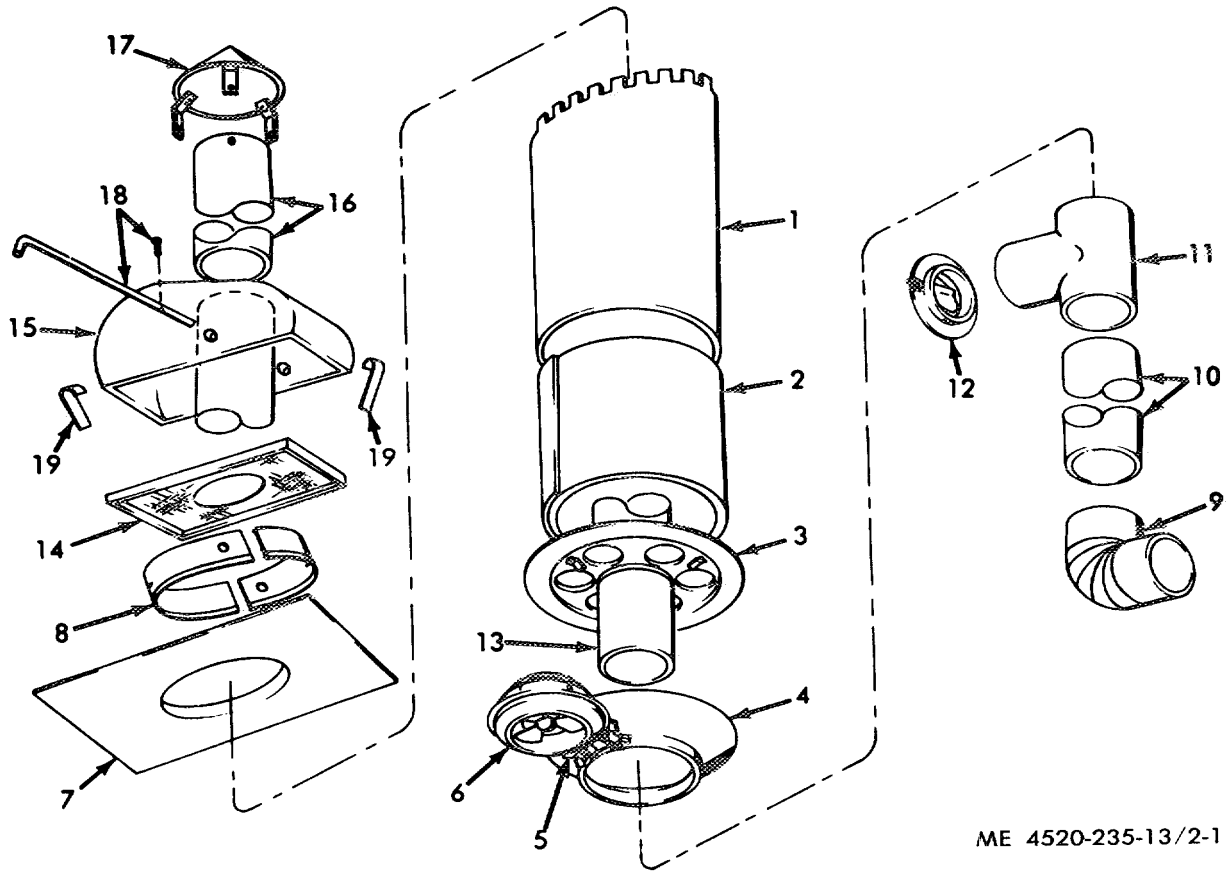
This section deals primarily with the operating procedures to be 'followed when using this equipment. However, in the interest of simplicity installation or setting up instructions are also included.

2-2. Installation of Separately Packed Components

The basic heater is shipped completely assembled and ready for installation. It will be necessary to assemble the stove pipe, rain cap-to-pipe, roof jack and heat shields prior to making the installation. Refer to figure 2-1.

NOTE

Figure 2-1 covers all models except models 441-4ABJ and 444-4A. The only difference in the aforementioned models is that item 5 is a wing nut and item 9 is a Tee shaped stove pipe.



1. **Shield**
2. **Shield**
3. **Damper**
4. **Adapter**
5. **Wing nut (or Knurled Nut)**
6. **Fan**
7. **Flashing**
8. **Collar half**
9. **Stove pipe elbow (or tee)**
10. **Pipe**
11. **Stove pipe tee**
12. **Regulator**
13. **Pipe**
14. **Screen**
15. **Hood**
16. **Pipe**
17. **Cap**
18. **Pin**
19. **Strap**

Figure 2-1. Roof jack assembly and circulating fan installation.

2-3. Installation or Setting-up Instructions

a. Location.

(1) Install heater in a room adequately ventilated to insure complete combustion of fuel oil.

(2) Connect heater to a flue having sufficient draft at all times to assure safe operations.

(3) Heater shall rest on a non-combustible stove board of sufficient size as to extend beyond rear and sides of fuel oil can.

(4) When locating the heater, allow three feet between heater and combustible material, unless shielded by metal or other approved noncombustible material. The shield shall be two inches from the combustible material, six inches from the heater and extend beyond rear and sides of fuel oil can .

(5) the smoke pipe shall be at least 18 inches from combustible material, unless shielded. When the smoke pipe is protected by sheet metal placed at least one inch from the surface to be protected and extending the length of the pipe and 12 inches beyond it on both sides, clearance may be reduced to nine inches.

b. Installation of Pipe Shield.

(1) Fit upper pipe shield (fig. 2-2) to underside of hole in roof. The tabs must be rebent to conform to the pitch of the roof. The straight tabs

extend up through hole and must be bent over onto top of roof to hold shield in position.

(2) Slide lower pipe up into upper shield. Fit damper into hole in ceiling, from underneath, with the clips upward. Bend damper clips over onto top of ceiling also, to hold damper in place. Secure damper to ceiling with two screws.

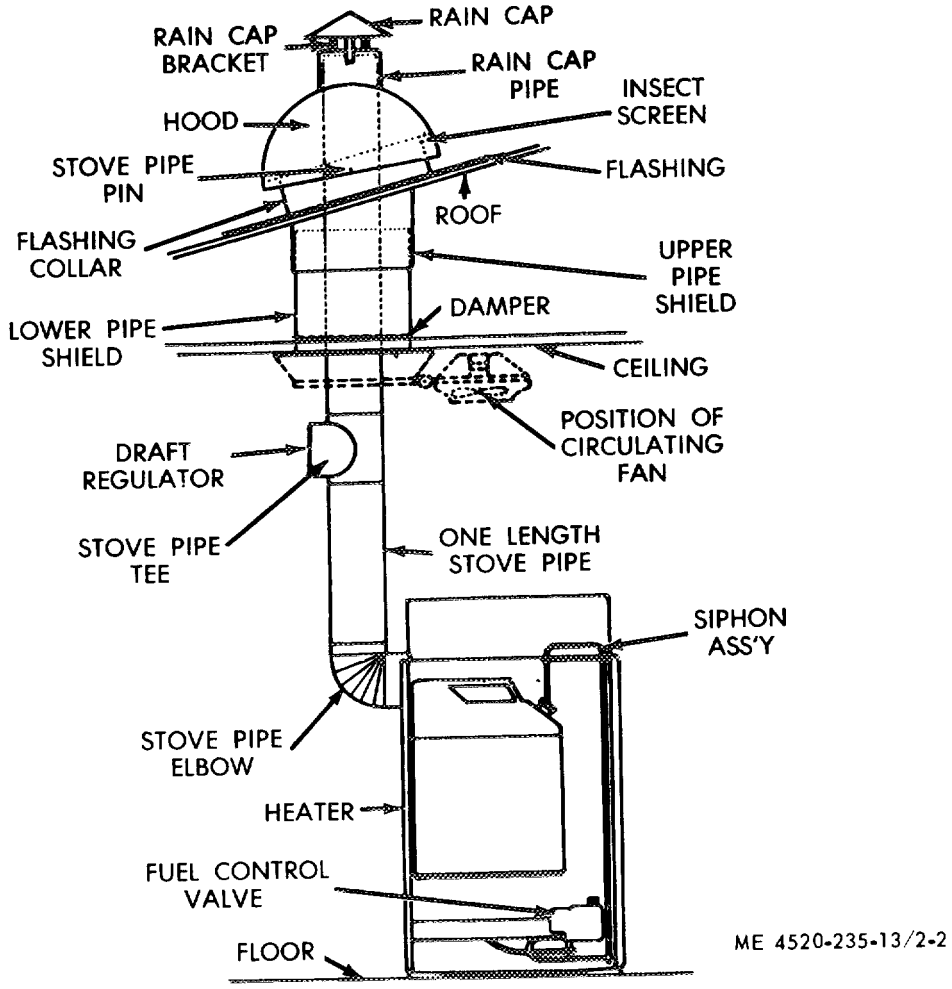


Figure 2-2. Spacer heater installation.

c. Installation of Circulating Fan Assembly (fig. 2-1).

(1) Remove two screws holding damper (3) to ceiling. Do not remove damper assembly.

(2) Install adapter assembly (4) over edge of damper assembly and secure with two screws. Use additional screws to firmly secure adapter assembly to ceiling.

(3) Loosen wing nut or knurled knob (5) and swing fan (6) and place it in the desired position. Tighten wing nut or knurled knob.

(4) Connect fan to 115 volt, 60 hertz outlet only. Be sure cord is not close to heater.

(5) Refer to figure 2-3 for summer installation.

NOTE

Section of stove pipe passing through damper should not extend two inches below ceiling for summer installation of fan assembly.

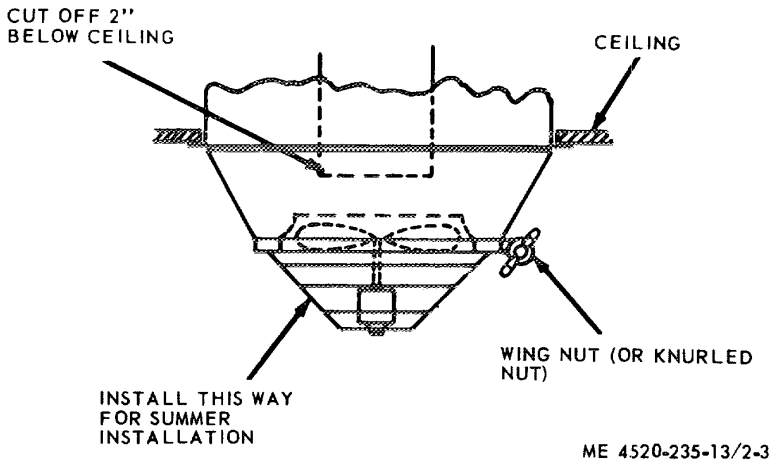


Figure 2-3. Circulating fan, summer-installation.

d. Installation of Roof Flashing Assembly (fig. 2-1).

(1) Place flashing (7) and collar assembly (8) lengthwise with roof rafters over hole in roof. The flanged edge of flashing must be upward. Bend the flange over one rib of the roof.

(2) Form the other edge of flashing against next rib of roof and bend it over the rib.

(3) Apply roof cement on all edges of flashing to prevent leaks.

e. Installation of Heater.

(1) Place heater on the stove board, in location selected.

(2) Fit elbow onto the heater flue collar bolt elbow to flue collar with one bolt.

(3) The center of elbow outlet must line up with the center of damper installed on ceiling.

(4) Fit one length of stove pipe onto elbow.

Install draft regulator tee on this length of stove pipe. The regulator vane must be in position shown in figure 2-2.

(5) Slip the four jointed lengths of stove pipe up through damper, pipe shield and roof flashing assembly. Lower end of stove pipe and connect with top of draft regulator tee assembly.

f. Installation of Hood, Rain Cap, and Stove Pipe.

(1) Fit insert screen up into hood with flanged edges down.

(2) Slip hood and screen assembly down over stove pipe. Attach rain cap to top of stove pipe with screws and bolts.

(3) Aline the holes in the sides of the hood with those in the sides of the flashing collar. Insert the stove pipe pin through holes in one side of hood and collar. Drive pin through stove pipe and slip it through holes in other side of collar and hood. Insert cotter pin through hole in pin and bend it over.

(4) Straighten the anchor straps and slip one end through slots in collar. Bend ends over to secure them to collar.

(5) Insert other end of anchor straps through slots in end of hood. Adjust position of hood so that hole is alined with holes in insect screen, flashing and damper. Then bend ends of anchor strap over to hold securely in position.

g. Level Heater. The heater and fuel control valve must be level to secure even flow of oil into the burner pot. To level. proceed as follows:

(1) Place level across top grille from front to rear and side to side. Adjust leveler (fig. 1-1) bolts on bottom of base until heater is level.

(2) Place the level across the top of the fuel control valve from front to rear and side to side. Bend the valve bracket until valve is level.

WARNING

Do not operate heater in an enclosed area unless the exhaust gases are properly vented to the outside. Inhalation of exhaust fumes may result in serious illness or death.

2-4. Controls

a. The only controls necessary for operation of this equipment is the constant level fuel control valve and the draft regulator.

b. The constant level fuel control valve controls the amount of oil entering the burner and prevents any overflow. The fuel control valve is located on the left side of the heater (fig. 2-2).

c. The draft regulator is engineered to provide an efficient draft when stove pipe connections are right. This heater operates most efficiently with .05 inch to .06 inch draft.

CAUTION

Do not tamper with draft regulator as it operates without adjustment.

2-5. Starting the Equipment

a. Preparation for Starting.

(1) Before lighting heater, perform necessary preventive maintenance checks and services.

(2) Examine the fuel can and all connections for any leaks. Tighten connections if leaks occur.

WARNING

Never operate heater with leaking connections.

b. Priming Heater.

(1) Hang filled fuel can on hook on left side of heater.

(2) Remove the fuel can filler cap and install siphon assembly by inserting small tube into siphon tube and siphon barrel into fuel can. Fit cap into fuel can opening.

(3) Move siphon assembly up and down rapidly, 4 to 6 strokes. Strokes should be 4 inches to 6 inches long. Siphon is now primed.

NOTE

Be sure that an operable fire extinguisher is available in the operating perimeter before starting the heater.

c. Lighting Heater.

(1) To start oil flow, raise RESET LEVER on fuel control valve (fig. 2-4).

NOTE

On models 441-4ABJ and 444-4A press RESET LEVER down.

(2) Turn CONTROL KNOB to high.

(3) Open burner door and observe that oil has entered burner well. Reset CONTROL KNOB to LOW position (On Models 441-4AB and 444-4A, reset CONTROL KNOB to FIRST MARK POSITION). Reprime if oil does not come into burner within two minutes.

(4) Crumble a small piece of paper, light and drop into burner bottom. The kindler will light.

(5) Close and latch burner door. Watch flame through door peek hole. Allow burner to operate 15 minutes before regulating flame.

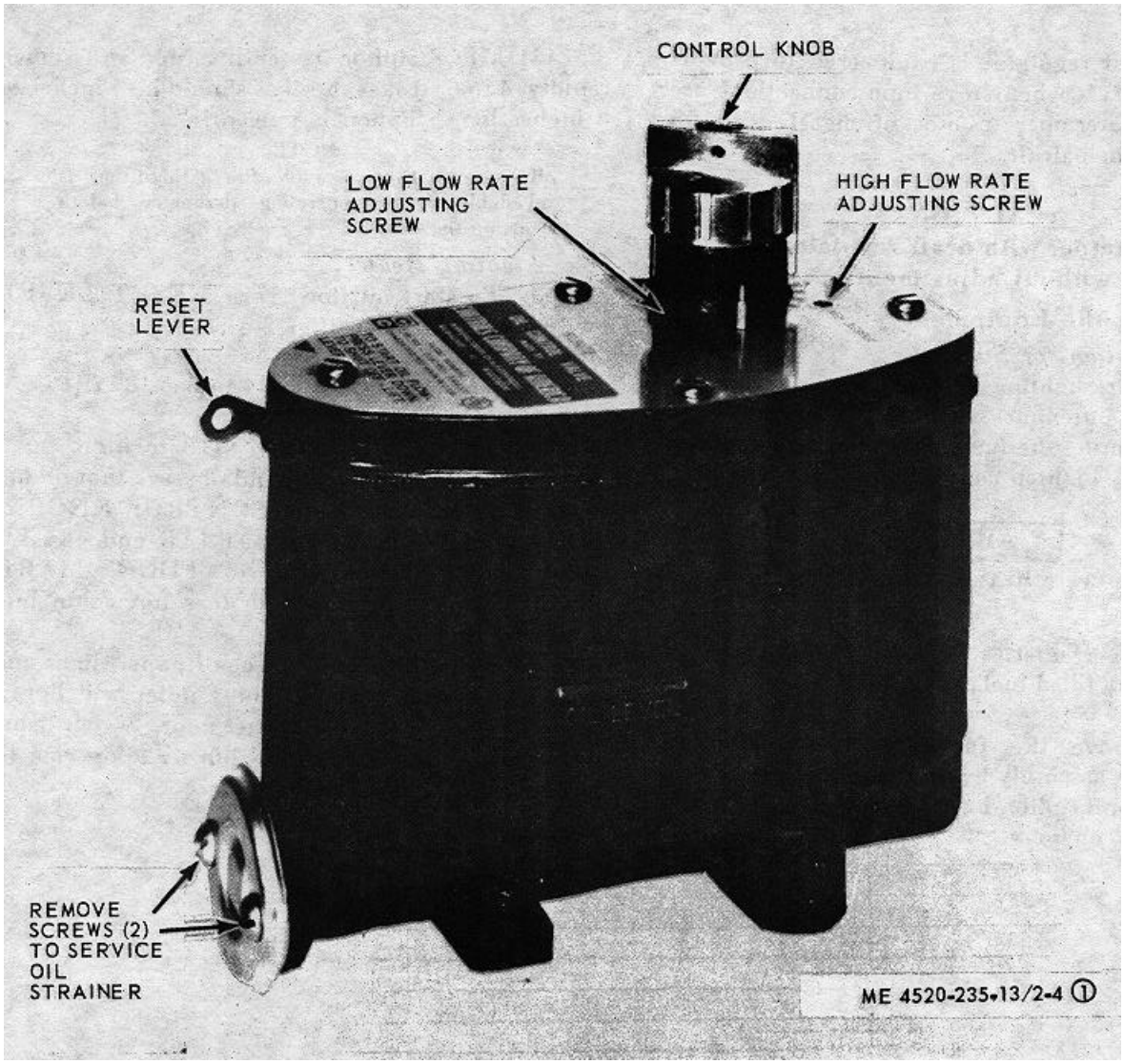


Figure 2-4. Fuel control valve (Used or Models 441-4ABJ and 444-4A) (Sheet 1 of 2).

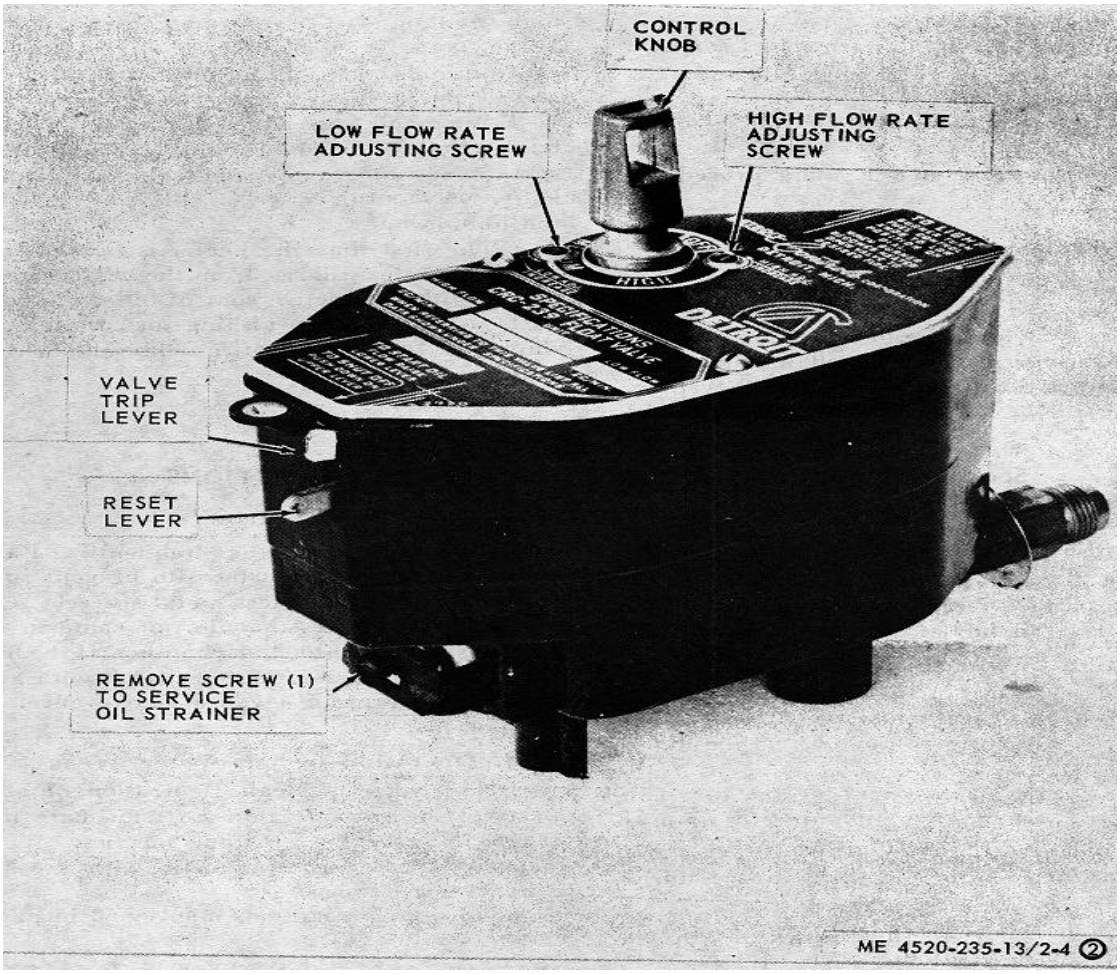


Figure 2-4. Fuel control valve (Used on all other models (Sheet 2 of 2).

d. Regulating Flame.

(1) Increase heat output by turning fuel control knob counterclockwise. Turn knob one position at a time, until desired height of flame is obtained. Allow 10 minutes between each move.

NOTE

If burner is not hot enough, the flame will be red and smoky and a roaring, vibrating noise will be noticed. This is not dangerous. Turn fuel control knob to LOW, (On Models 444-4ABJ and 444-4A, turn knob to FIRST MARK). Then turn knob gradually until desired flame is obtained.

(2) Decrease heat output by turning fuel control knob clockwise to desired flame height. Do not turn below LOW (or FIRST MARK) or flame may go out.

2-6. Stopping the Equipment

a. To shut off heater:
(1) Turn fuel control knob to LOW.
(2) To, stop oil flow, reset VALVE TRIP LEVERS.
(3) After oil in burner is consumed, flame will go out.

b. To shut off heater (Models 441-4ABJ and 444-4A):
(1) Turn fuel control knob clockwise to OFF.
(2) To stop oil flow. raise RESET LEVER.
(3) After oil in burner is consumed, flame will go out.

CAUTION

Never light a hot burner

c. To replace fuel can:

(1) Raise siphon assembly from fuel can and rest pump cylinder end in drain trough of the siphon tube assembly.

(2) Lift off empty can and hang filled can on hook.

(3) Repeat priming and lighting procedures (para 2-5)

2-7. Operation of Equipment

a. Start the space heater (para 2-5).

b. Heat output is controlled manually by adjustment of the fuel control knob, which may be varied from a low pilot flame to maximum output.:

c. The heater operates with a yellow flame. The: starting flame may be bluish, tinged with yellow. The low fire will be yellow and the medium and
high fire flames will become a golden yellow color. If the flame is smoky with a high flame, turn the control knob back slightly until the flame is clean an d clear.

d. When oil gets low it is possible for an air bubble in the fuel line to stop the flow of oil. In this event, place a pan under the fuel control valve and loosen valve strainer screws. Flow of oil will carry the bubble out.

e. The first time the heater is lighted, a slight vapor and odor will rise from the heater shell. This is due to the protective coat of oil applied to steel parts to prevent tarnishing or rusting during shipment. It will burn off quickly and will not be noticed again.

Section II. OPERATION UNDER UNUSUAL CONDITIONS

2-8. Operation in Extreme Cold (Below 0° F)

a. Service the fuel strainer (para 4-14) more frequently to remove accumulated moisture.

b. Keep fuel can full at all times.

2-9. Operation in Dusty or Sandy Areas

a. Take all necessary precautions to keep dust and sand from: entering fuel system. Service fuel strainer more frequently to remove accumulated sediment.

b. Provide maximum protection for the equipment at all times. Take advantage of natural barriers whenever possible.

2-10. Operation Under Rainy or Humid Conditions

a. Close door whenever possible to keep out moisture. During dry periods, when equipment is not in use, open door to allow the unit to dry.

b. Take all necessary precautions to keep moisture from entering the fuel supply. Service the fuel strainer more frequently to remove accumulated moisture.

c. Dampness increases corrosive action. Wipe all accessible expose areas frequently. Paint all chipped or scratched surfaces to prevent rust. Use petroleum jelly to protect metal surfaces. Coat all unprotected surfaces that do not come in contact with burner or combustion chamber. If the heater is outside and not operating, protect it with a canvas or other waterproof cover. Remove cover during dry periods.

2-11. Operation in Salt Water Areas

a. Salt water will cause corrosion of all metal parts of the space heater. Extreme care must be taken to prevent rust from forming. Wash salt deposits from the equipment with fresh water whenever possible.

b. Observe precautions mentioned in paragraph 2-10.

2-12. Operation at High Altitudes

a. Heat output will be reduced at 4000 feet or more above sea level.

b. Raising the position of the draft regulator will improve burner output. Add one half to one length of stove pipe below the regulator.

CHAPTER 3

OPERATOR/ CREW MAINTENANCE INSTRUCTIONS

Section I. LUBRICATION INSTRUCTIONS

There is no lubrication required on the equipment.

Section II. PREVENTIVE MAINTENANCE CHECKS AND SERVICES

3-1. General

a. To ensure that the space heater is ready for operation at all times, it must be inspected systematically so that defects may be discovered and corrected before they result in serious damage or failure.

b. The necessary preventive maintenance checks and services to be performed are listed and described in table 3-1.

c. Defects discovered during operation of the unit shall be noted for future correction, to be made as soon as operation has ceased. Stop operation immediately if a deficiency is noticed during operation which would damage the equipment if operation were continued. All deficiencies and shortcomings will be recorded, together with the corrective action taken on DA Form 2404 (Equipment Inspection and Maintenance Work sheet), at the earliest possible opportunity.

3-2. Daily Preventive Maintenance Checks and Services

Table 3-1 lists those things the operator must do before, during and after operation of the heater in order to keep it functioning properly.

Table 3-1. PREVENTIVE MAINTENANCE CHECKS AND SERVICES

B--Before operation D--During operation A--After operation

Interval and sequence No.			Item to be inspected Procedure
B	D	A	
1			FUEL CAN Fill fuel can. Before re-filling inspect can for sediment, dirt and water.
	2		FUEL LINES AND CONNECTIONS Inspect for fuel leaks. Check heater base plate for signs of leakage. Wipe all fuel line connections with dry cloth and inspect for cracks using a flash light. Report cracks or leaks to higher maintenance personnel.
3			STOVE PIPE CONNECTIONS inspect stove pipe for loose fitting connections. Inspect stove pipe joints to be sure they are tightly connected together through roof jack assembly.
4		5	COMBUSTION CHAMBER Remove any trash or other foreign objects.

Section III. TROUBLESHOOTING

3-3. General

This section contains information useful to the operator in diagnosing and correcting unsatisfactory operation or failure of the space heater.

3-4. Troubleshooting

a Table 3-2 list malfunctions which may occur in this equipment. Each malfunction for an individual component unit, or system is followed by a list of test or inspections which will help you to determine probable causes and corrective actions to be taken. You should perform the tests and / or inspections and corrective actions in the order listed.

b. This manual cannot list all malfunctions that may occur, nor all test or inspections and corrective actions. If a malfunction is not listed or is not corrected by listed corrective actions, notify your supervisor.

NOTE
Before you use this table, be sure you have performed all applicable operating checks.

Table 3-2. TROUBLESHOOTING

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION
1. BURNER FAILS TO LIGHT OR FLAME DIES OUT.
Step 1. Check to see if fuel control reset lever is in position.
Place reset lever in correct position if necessary.
Step 2. Check to see if fuel can is empty.
Refill or replace empty fuel can.
Step 3. Check contents of fuel can for evidence of water or dirt.
Drain fuel system and refill with clean fuel.
Step 4. Check to see if heater is level.
Level heater if required.
Step 5. Check to see if burner fuel oil pipe is raised out of position.
Correct pipe position if required.
2. INSUFFICIENT HEAT.
Step 1. Check to see if burner fuel oil inlet pipe is raised out of position.
Correct pipe position if required.
Step 2. Check to see if fuel control knob is set too low.
Turn control knob to proper position.
3. FLUCTUATING FLAME.
Check to see if there is water in the fuel can.
Drain fuel system and refill or replace fuel oil can.
4. SMOKY FLAME.
Step 1. Check to see if the burner door is closed securely.
Adjust latch and close door.
Step 2. Check to see if heater is level.
Level heater if required.
5. OIL OR GAS ODOR.
Step 1. Check to see if the fuel line connections are loose.
Tighten fuel line connections if required.
Step 2. Check to see if the burner door is closed securely.
Adjust latch and close door.

Section IV. MAINTENANCE PROCEDURES

3-5. General

The instructions in this section apply only to the operator, to assist him in maintaining the space heater.

3-6. Fuel Can

The fuel can must be thoroughly drained and flushed out before refilling. Be sure there is no sediment, dirt or water in it. When filled, and installed check for fuel leaks at all seams and fittings.

3-7. Fuel Control Valve

Check valve control knob for looseness and ease of operation.

CHAPTER 4

ORGANIZATIONAL MAINTENANCE INSTRUCTIONS

Section I. SERVICE UPON RECEIPT OF MATERIAL

4-1. Inspecting and Servicing Equipment

a. Visually inspect equipment for any damage which may have occurred during shipment.

b. Inspect heater assembly for signs of damage, missing parts, paying particular attention to crushed, broken or loose roof jack assembly and circulating fan.

4-2. Installation

Refer to paragraph 2-3 for information on installing this equipment.

Section II. MOVEMENT TO A NEW WORKSITE

4-3. Dismantling for Movement

a. Remove rain cap from top of stove pipe.

b. Remove hood by straightening anchor straps and removing pin from sides. Lift off hood and insect screen.

c. Remove joints of stove pipe from damper, pipe shield, and roof flashing. Remove elbow and draft regulator tee.

d. Straighten and remove flashing and collar assembly from roof. Straighten tabs and remove pipe shields.

e. Unplug cord assembly from electrical outlet and remove fan assembly.

f. Straighten tabs on damper assembly and remove damper assembly from ceiling.

g. Be sure no fuel remains in heater or fuel control valve. Clean stove pipe, elbow, tee and heater of all loose carbon.

4-4. Reinstallation after Movement

Reinstall according to installation instructions given in paragraph 2-3.

Section III. REPAIR PARTS, SPECIAL TOOLS AND EQUIPMENT

4-5. Tools and Equipment

Tools and / or equipment authorized for the space heater are listed in the repair parts and special tool list, appendix C of this manual.

4-6. Special Tools and Equipment

No special tools or equipment other than those listed in section III, appendix C are required by organizational maintenance personnel to maintain the space heater.

4-7. Maintenance Repair Parts

Repair parts and equipment are listed and illustrated in the repair parts and special tools list covering organizational maintenance in appendix C of this manual.

Section IV. PREVENTIVE MAINTENANCE CHECKS AND SERVICES

4-8. General

The necessary preventive maintenance checks and services to be performed by organizational maintenance personnel are listed and described in table 4-1.

4-9. Monthly and Quarterly Preventive Maintenance Checks and Services

Table 4-1 list those things that organizational maintenance personnel must do on a monthly or quarterly basis in order to keep the space heater functioning properly.

Table 4-1. Preventive Maintenance Checks and Services (Monthly and Quarterly)

M--Monthly Q--Quarterly

Interval and sequence No. M	Interval and sequence No. Q	Item to be inspected Procedure
	1	FUEL LINES AND CONNECTIONS Check for leaks in fuel lines or connections. Replace any faulty lines or connections.
	2	STOVE PIPE CONNECTIONS Inspect stove pipe joints to be sure they are tightly connected together through the roof jack assembly. Check also for split seams or rust on pipes. If any are found, replace pipe.
3	4	FUEL CONTROL VALVE Examine fuel strainer for foreign material, service control and strainer. Remove fuel strainer and clean cavity and screen. If any foreign material is found. Remove inlet fuel line from siphon tube and flush fuel line with clean fuel oil. Replace fuel line securely.
5	6	SIPHON Inspect and clean siphon. Remove siphon tube from heater. Flush with (clean fuel oil, then use compressed air. Replace and: tighten connection securely.
	7	BURNER Remove burner parts, clean and inspect. Replace any defective parts.
	8	COMBUSTION CHAMBER ECONOMIZER Remove combustion chamber economizer, and inspect. Replace if required.
	9	FUEL AND DRAFT REGULATOR Test draft regulator for proper draft. Inspect stove pipe connections for tight joints and proper installation.
	10	CIRCULATING FAN Inspect fan mounting bracket for security. Check mounting bushings and electrical cord for evidence of wear.

Section V. TROUBLESHOOTING

4-10. General

This sectioncontains information useful to organizational maintenance personnel in diagnosing and correcting an unsatisfactory condition that may exist in equipment.

4-11. Troubleshooting

Table 4-2 list malfunctions which may occur in this equipment. Each malfunction for an individual component, unit, or system is followed by a list of tests or inspections which will help you to determine probable causes and corrective actions to take. You should perform the tests and / or inspections and corrective action in the order listed.

Table 4-2. TROUBLESHOOTING

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION

1. BURNER FAILS TO LIGHT OR FLAME DIES OUT.

Step 1. Check to see if oil is entering burner.
Clean burner inlet and valve strainer.
Step 2. Check to see if draft is low or down.
Correct draft if required.
Step:1. Check to see if siphon or siphon tube is cracked or broken
Replace tube if required.
Step 4. Check to see if air inlet or flue is restricted.
Remove restriction.

2. INSUFFICIENT HEAT

Step 1. Check to see if fuel is entering burner
Clean burner inlet and valve, if required.

Table 4-2. TROUBLESHOOTING-Continued

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION
Step 2. Check to see if draft is low or down. Correct draft if required
Step 3. Check to see is air inlet or flue is restricted Remove restriction
3. HEAVY SOOT DEPOSIT IN BURNER OR FLUE PIPE.
Step 1. Check to see if draft is correct. Correct draft.
Step 2. Check to see if correct grade of fuel is being used. Change fuel if incorrect grade is being used.
Step 3. Check to see if too much fuel is flowing at high fire setting. Reduce fuel flow.
Step 4. Check to see if low fire segment or burner rings are warped or burned out of shape. Replace, if required.
Step 5. Check to see air inlet or flue is restricted. Remove restriction
4. FLUCTUATING FLAME. Check to see if draft is correct Correct draft if required.
5. SMOKY FLAME.
Step 1. Check to see if draft is correct. Correct draft if required.
Step 2. Check to see if air holes in burner are clogged. Clean burner if required.
Step 3. Check to see if low fire segments or burner rings are warped or burned out of shape. Replace as necessary.
Step 4. Check to see if air inlet or fuel is restricted. Remove restriction
6. OIL OR GAS ODOR.
Step 1. Check to see if proper grade of fuel is being used. Change fuel if incorrect grade is being used.
Step 2. Check to see if draft is correct. Correct draft, if required.
Step 3. Check fuel pipe joints. Tighten pipe joints if required.

Section VI. MAINTENANCE OF FUEL SYSTEM

4-12. General

a. The heater fuel system is designed to burn fuel oil conforming to specification VV-F-800, class DF-1, DF-2, or DF-A having a cloud point not lower than -55° F.

b. A siphon provides a constant flow of fuel from a standard military rectangular can to a constant level control valve. Fuel flows through a wire mesh strainer within the control valve. The fuel is metered out to the burner in a regulated amount.

4-13. Control Valve

a. Removal and Installation.

(1) Heater must be shut off and cool. Depress valve trip lever on fuel control valve (fig. 2-4 (2)) to shut off fuel flow.

(2) Lift and remove the siphon assembly (fig. 4-1) from the fuel can and the siphon drain assembly (27, fig. 4-2).

(3) Disconnect both fuel lines (25) and (26). Depress valve trip lever (fig. 2-4 (2)) on fuel control valve and allow oil to drain from the valve.

(4) Remove two bolts from the base of the control valve (24, fig. 4-2), remove valve. To install new valve, reverse procedure. Securely tighten connections and check for leaks.

b. Removal and Installation (Models 441-4ABJ and 444-4A).

(1) Heater must be shut off and cool. Raise the reset lever of the fuel control valve to shut off fuel.

(2) Repeat steps (2), (3), and (4) above.

c. Cleaning and Inspection.

(1) Clean fuel control valve with an approved cleaning solvent and dry thoroughly.

(2) Inspect unit for any signs of damage.

d. Adjustment. To check control valve fuel flow rate, proceed as follows:

(1) Disconnect fuel control feed line (25, fig. 4-2 from outlet. Place pan below opening. Be sure that fuel is flowing to valve. Valve must be in a level position .

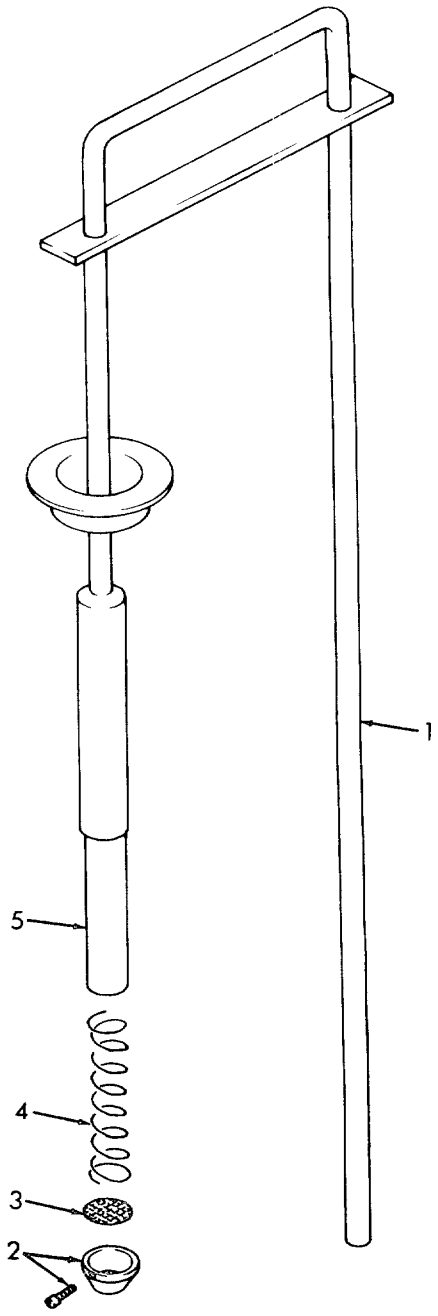
(2) Turn control knob all the way open (HIGH) and allow flow to stabilize. Check flow for one minute by catching flow in 50 cubic centimeter graduated container. Flow should be in accordance with rating listed in paragraph 1-8 *b* (8), (9), or (10).

(3) Adjust high flow rate adjusting screw (fig.2-4). Turn control knob counterclockwise to increase and clockwise to decrease flow. Recheck flow after adjusting.

(4) Turn control knob to LOW position (FIRST MARK position on Models 441-4ABJ and 444-4A) and allow flow to stabilize. Check the flow for one minute by catching flow in container. Flow should be in accordance with rating listed in paragraph 1-8*b*(8), (9), or (10).

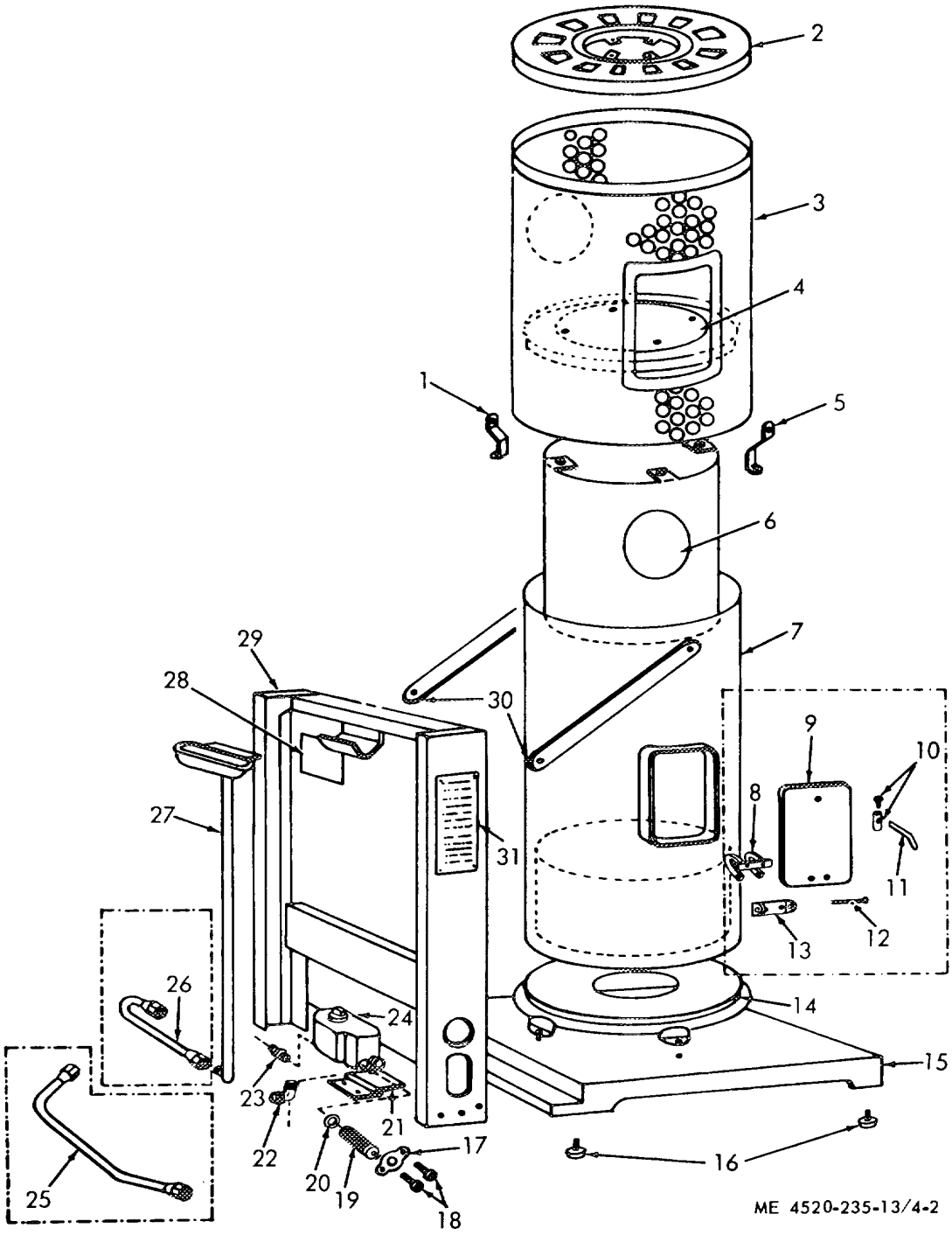
(5) Adjust low flow rate adjusting screw (fig. 2-4). Turn control knob counterclockwise to increase and clockwise to decrease flow. Recheck flow after adjusting.

(6) Replace fuel control feed line and check for leaks.



1. Siphon barrel
2. Bottom
3. Screen
4. Spring
5. Plunger assembly

Figure 4-1. Siphon assembly, exploded view.



1. Leg
2. Grille
3. Case
4. Top drum
5. Leg
6. Economizer
7. Drum
8. Hinge, upper
9. Door w/bushing
10. Lug and setscrew
11. Handle
12. Pin
13. Hinge, lower
14. Bottom, drum
15. Base
16. Leveler
17. Cap, strainer
18. Screw, strainer
19. Strainer, valve
20. Gasket
21. Bracket
22. Elbow
23. Connector
24. Valve, fuel control
25. Fuel line
26. Fuel line
27. Siphon drain tube
28. Plate, name
29. Frame
30. Brace
31. Plate, instruction

Figure 4-2. Basic heater assembly, exploded view.

4-14. Fuel Strainer

a. Removal.

(1) Heater must be shut off and cool. Depress valve trip lever (fig. 2-4 (2) to shut off fuel flow.

(2) Place a receptacle below fuel control valve. Loosen two screws holding siphon drain (27, fig. 4-2) to top of frame (29). Disconnect line (26) from bottom of the siphon drain. Remove screws (18), gasket (20) and cap (17). Allow surplus oil to drain into receptacle.

b. Cleaning and Inspection.

(1) Brush strainer inside and out with a soft brush. Rinse in clean fuel oil.

(2) Wipe strainer chamber with a lint free cloth. Inspect for any damage. Replace if necessary.

c. Installation. Install strainer, strainer cap and gasket in reverse order of removal. Check for leaks.

4-15. Fuel Strainer (Used on Models 441-4ABJ and 444-4A).

a. Removal.

(1) Heater must be off and cool. Raise reset lever (fig. 2-4) to shut off fuel flow.

(2) Place a receptacle below fuel control valve and remove strainer screws(18, fig. 4-2), gasket (20), and strainer cap (17). Allow surplus oil to drain into receptacle. Remove strainer (19).

b. Cleaning and Inspection.

(1) Brush strainer inside and out with a small stiff brush, such as a tooth brush, or place in boiling wafer for ten minutes. Rinse in clean fuel oil.

(2) Repeat step (2) of paragraph 4-14 *b* above and paragraph 4-14 *c* above.

4-16. Siphon System

a. General. The siphon system consists of the siphon assembly (fig. 4-1) and the siphon drain tube (27, fig. 4-2). The siphon assembly fits into the siphon drain tube when heater is ready for operation.

b. Removal.

(1) Lift and remove siphon assembly from siphon drain tube.

(2) Remove two bolts holding the siphon drain tube to the frame (29) and remove tube. Flush tube with clean fuel oil and be sure the outlet connection is clean.

(3) Remove bottom (2, fig. 4-1) from siphon barrel (1). Remove screen (3) spring (4) and plunger (5). Clean siphon by flushing with clean fuel oil. Clean inside of barrel and plunger in clean oil.

CAUTION

Do not kink siphon or siphon tube.

4-17. Fuel Lines

a. Removal and Installation. Remove fuel lines from fuel system as necessary for cleaning, inspection or replacement. Refer to figure 4-2 for fuel lines and major components.

b. Cleaning and Inspection.

(1) Clean lines and fittings in an approved solvent and dry thoroughly.

(2) Inspect all meter parts for damaged threads obstructions kinks or bend cracks or other damage. Replace if damaged.

Section VII. MAINTENANCE OF THE BURNER ASSEMBLY

4-18. General

The burner should be cleaned quarterly or as often as necessary. A natural accumulation of carbon on the bottom and sides need not be removed unless oil inlet becomes clogged.

4-19. Burner Cleaning

To clean burner proceed as follows:

a. Shut off heater and allow it to cool.

b. Open burner door, bend up tabs which hold burner rings in position and remove burner ring section and low fire rings. Tabs are used only to keep burner rings in place during shipment.

c. Examine burner ring sections and low fire segments. Replace all warped or burned out-of-shape rings. Clean rings with a wire brush.

d. Use a wire brush to clean carbon from burner. Do not scrape carbon from sides of burner. Clear clogged holes with a toothpick. Remove all carbon from burner.

CAUTION

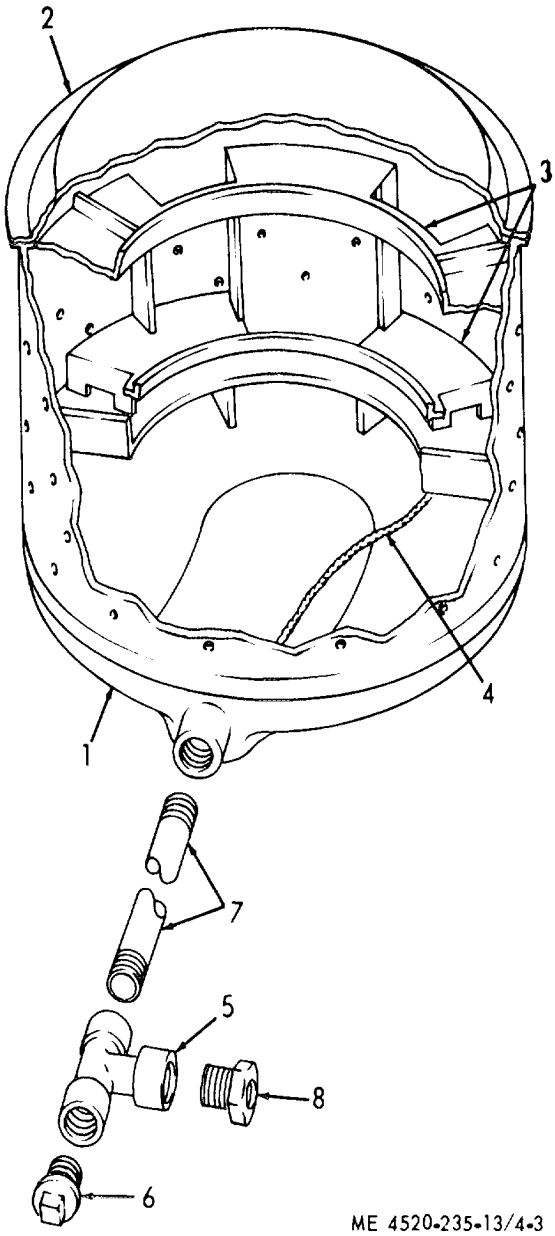
Do not use metal pick on holes in the sides of the burner as this will enlarge them.

e. Remove drain plug (6, fig. 4-3) and clean oil inlet pipe of all carbon with a wire. Hold oil inlet tube with a wrench when removing plug. Replace drain plug securely after cleaning. Clean inside of combustion chamber if there is a heavy accumulation of soot or carbon.

4-20. Burner Parts Replacement

a. Replace one low fire ring (3, fig. 4-3) in burner between ring dividers. The word TOP on ring must be in the up position. Rings must rest on three studs on wall of burner. Replace other rings m the same manner.

b. Replace two piece burner ring evenly and securely on burner top rim. Convex side of ring must be upward.



1. Pot burner
2. Ring, top half
3. Wick
4. Tee
5. Plug
6. Plug
7. Nipple
8. Bushing

Figure 4-3. Burner assembly.

Section VIII. REGULATING THE DRAFT

4-21. General

Three draft faults that interfere with the natural draft through the heater and result in decreased efficiency, soot and carbon, in the burner and combustion chamber are high, low and down drafts.

4-22. High Draft
High draft pulls gases up the chimney before they are burned and causes a high consumption of fuel oil, a lack of heat, a fluctuating flame and formation of soot. High draft is caused by additional lengths of stove pipe added to the original lengths or high winds. High draft is generally controlled by the draft regulator. If necessary, with an extremely high draft, install another draft regulator above the original one.

4-23. Low Draft
Low draft causes a lazy, smoky flame, formation of soot, and a lack of heat. It is caused by loose fitting pipe and / or restricted flues or chimneys. Be sure each section of stove pipe fits tightly together, and the flue and chimney passages are clean and unrestricted.

4-24. Down Draft

a. Down draft is caused by air currents being forced down the stove pipe. It results in fluctuating flame, gas odors from the heater, and accumulation of soot. Some reasons for down drafts are, the top of the rain cap is below the ridge of the building; higher buildings on either side or large trees extending above the building.

b. Down drafts may be eliminated by extending the rain cap pipe at least two feet above the roof ridge line. If the extension is two feet or more, an outer pipe four inches larger in diameter, should be installed around the extension and sealed at both ends. For higher objects, such as adjoining buildings and high trees. An H type or similar hood will have to be installed in place of the rain cap.

4-25. Testing for Draft
Hold a lighted match at a narrow opening between the regulator vane and rim. If the flame is drawn into the opening, there is a draft and the regulator will automatically adjust it to the required .05 inch to .06 inch draft. If the flame is blown out, there is a down draft. Refer to paragraph 4-24. If the flame burns straight up, there is a low draft. Refer to paragraph 4-23.

CHAPTER 5

DIRECT SUPPORT MAINTENANCE INSTRUCTIONS

Section I. REPAIR PARTS, SPECIAL TOOLS AND EQUIPMENT

5-1. Tools and Equipment
There are no tools or equipment authorized other than those listed in appendix C for direct support maintenance personnel.

5-2. Special Tools and Equipment
There are no special tools or equipment required by maintenance personnel to maintain the space heater.

5-3. Maintenance Repair Parts
Repair parts and equipment covering direct support maintenance are listed and illustrated in the repair parts and special tools list, appendix C of this manual.

Section II. TROUBLESHOOTING

Refer to paragraphs 3-4 and 4-11 for troubleshooting information relative to this equipment.

Section III. GENERAL MAINTENANCE

The maintenance to be performed by direct support maintenance personnel on this equipment is limited repair of the fuel lines and fittings and repair of the roof jack assembly. Repair is accomplished by replacement.

Section IV. REMOVAL AND INSTALLATION OF MAJOR COMPONENTS

5-4. Heater Base

a. Remove and clean heater base (15, fig. 4-2).

b. Inspect heater base for elongated bolt holes, cracked corner welds, rust, peeling paint, dents and distortion, leveling legs for stripped or damaged threads.

c. Repair heater base or replace if necessary. Install in the reverse order of removal.

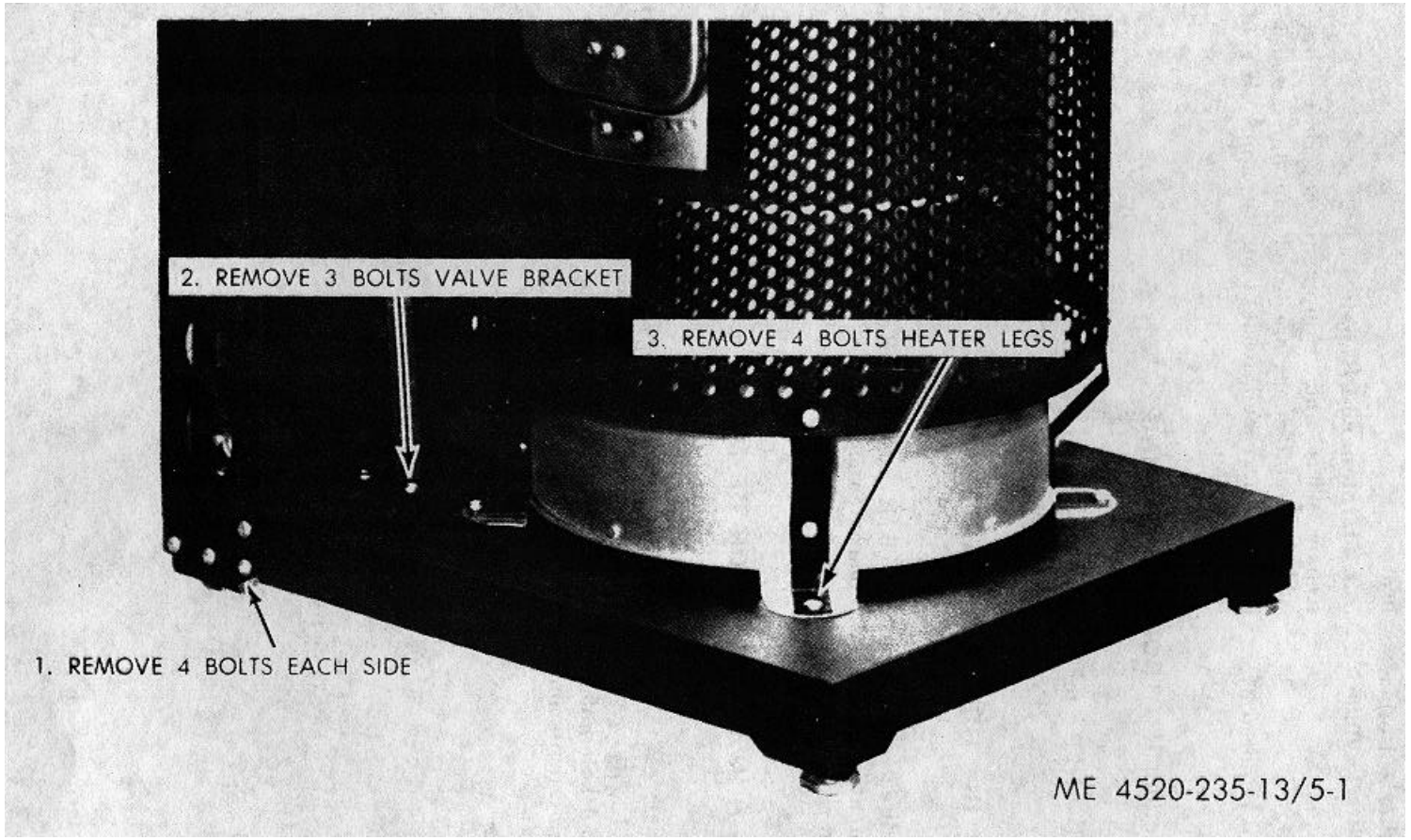


Figure 5-1. Heater base removal and installation.

5-5. Drum Assembly

a. Remove and clean heater drum assembly (fig. 5-2).

b. Inspect drum assembly components for elongated bolt holes, warped or burned out of shape parts, peeling paint, rust and clogged holes.

c. Repair heater drum assembly or replace if necessary. Install in the reverse order of removal.

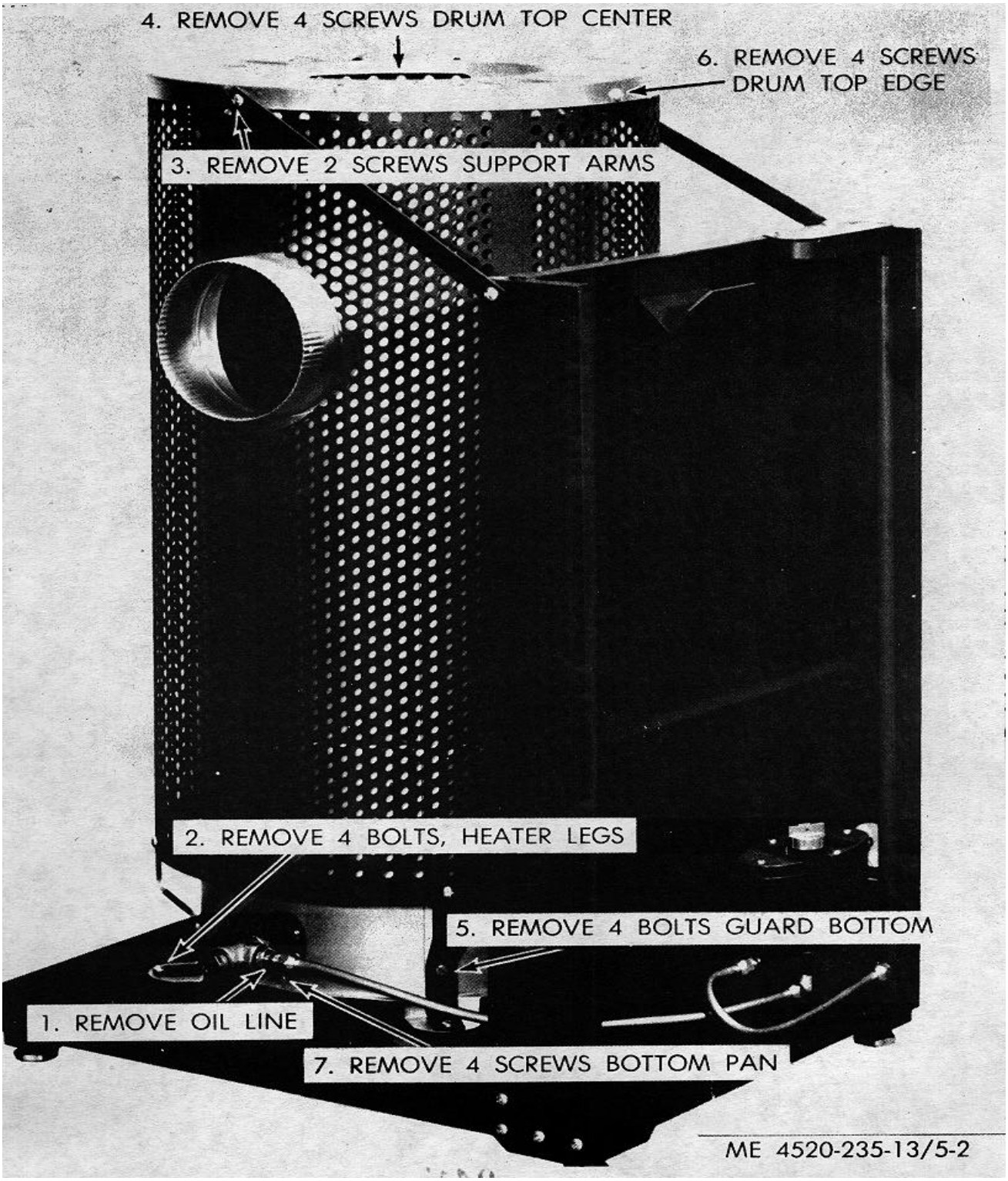


Figure 5-2. Drum assembly removal and installation.

5-6. Roof Jack Assembly

a. Remove and clean heater roof jack components (para 4-3).

b. Inspect draft regulator for proper operation (para 4-25).

c. Inspect heat shields, stove pipe, tees, rain cap and hood for damage, that is, dents, distortion and evidence of metal erosion.

d. Repair heater roof jack or replace components if necessary. Install in the reverse order of removal.

APPENDIX A

REFERENCES

A-1. Fire Protection TB 5-4200-200-10	Hand Portable Fire Extinguishers Approved for Army Users
A-2. Painting TM 9-213	Painting Instructions for Field Use
A-3. Maintenance TM 38-750	The Army Maintenance Management Systems
A-4. Shipment and Storage TM T40-90-1	Administrative Storage of Equipment
A-5. Destruction to Prevent Enemy use TM 750-244-3	Procedures for Destruction of Equipment to Prevent Enemy Use

APPENDIX B

MAINTENANCE ALLOCATION CHART

Section I. INTRODUCTION

B-1. General

a. This section provides general explanation of all maintenance and repair functions authorized at various maintenance levels.

b. Section II designates overall responsibility for the performance functions on the identified end item or component. The implementation of the maintenance functions upon the end item or component will be consistent with the assigned maintenance functions.

c. Section III lists the special tools and test equipment required for each maintenance function as referenced from section II.

d. Section IV Contains supplemental instructions or explanatory notes required for a particular maintenance function.

B-2. Explanation of Columns in Section II

a. Group Number, Column (1). The group number is a numerical group assigned to each assembly to identify components assemblies, subassemblies, and modules with the next higher assembly.

b. Assembly Group, Column (2). The applicable assembly groups are listed on the MAC in disassembly sequence beginning with the first assembly removed in a top down disassembly sequence. This column contains brief description of the components of each assembly group.

c. Maintenance Functions, Column (3). This column lists the various maintenance functions (A through K). The upper case letter placed in the appropriate column indicates the lowest maintenance level authorized to perform these functions. The symbol designations for the various maintenance levels are as follows:

C--Operator or crew
O--Organizational maintenance
F--Direct support maintenance

The maintenance functions are defined as follows:

A—INSPECT: To determine serviceability of an item by comparing its physical, mechanical, and electrical characteristics with established standards.

B—TEST: To verify serviceability and to detect electrical or mechanical failure by use of test equipment.

C—SERVICE: To clean, to preserve, to charge, and to add fuel lubricants, cooling agents, and air. (If it is desired that elements, such as painting and lubricating, be defined separately, the may be so listed)

D—ADJUST: To rectify to the extent necessary to bring into proper operating range.

E—ALIGN: To adjust specified variable elements of an item to bring to optimum performance.

F—CALIBRATE: To determine the corrections to be made in the reading of instruments or test equipment used in precise measurement. Consists of the comparison of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared with the certified standard.

G—INSTALL: To set up for use in an operational environment such as an emplacement, site, or vehicle.

H—REPLACE: To replace unserviceable items with serviceable like items.

I—REPAIR: Those maintenance operations necessary to restore an item to serviceable condition through correction of material damage or a specific failure. Repair may be accomplished at each level of maintenance.

J—OVERHAUL: Normally, the highest degree of maintenance performed by the Army in order to minimize the time work is in process consistent with quality and economy of operation. It consists of that maintenance necessary to restore an item to completely serviceable condition as prescribed by maintenance standards in technical publications for each item of equipment. Overhaul normally does not return an item to like new, zero mileage, or zero hour condition.

K—REBUILD: The highest degree of materiel maintenance. It consists of restoring equipment as nearly as possible to new condition in accordance with original manufacturing standards. Rebuild is performed only when required by operational considerations or other paramount, factors and then only at the depot maintenance level. Rebuild reduces to zero the hours or miles the equipment, or component thereof, has been in use.

d. Tools and Equipment, Column (4). This column is provided for referencing by code the special tools and test equipment (sec. III). Required to perform the maintenance functions (sec. II).

e. Remarks, Column (5). This column is provided for referencing by code the remarks (sec. IV) pertinent to the maintenance functions.

B-3. Explanation of Columns in Section III

a. Reference Code. This column consists of number and a letter separated by a dash. The number references the T&TE requirements listed in section II. The letter represents the specific maintenance function the item is to be used with in columns A through K of Section II.

b. Maintenance Level. This column shows the lowest level of maintenance authorized to use the special tools or test equipment.

c. Nomenclature. This column lists the name or identification of the tool or test equipment.

d. Tool Number. This column lists the manufacturer's code and part number, or Federal stock number of tool or test equipment.

B-4. Explanation of Columns in Section IV

a. Reference Code. This column consists of two letters separated by a dash (entered from col. (5) of this sec. II). The first letter references alpha sequence in column (5) and the second letter references a maintenance function, column (3), A through K.

b. Remarks. This column lists information pertinent to the maintenance function to be performed (as indicated in sect. III.

Section II. MAINTENANCE ALLOCATION CHART

(1) Group No.	(2) Assembly Group	(3) Maintenance Functions											(4) Tools and	(5) Remarks
		A	B	C	D	E	F	G	H	I	J	K		
		Inspect	Test	Service	Adjust	Align	Calibrate	Install	Replace	Repair	Overhaul	Rebuild		
01	**HOUSING:**													
	Base				O				F				1	A
	Drum	F							F					
02	**FUEL SYSTEM:**													
	Control Valve	C		O	O				O				2	B
	Siphon System			O					O					
	Lines and Fittings	C							O	F				C
03	**BURNER ASSEMBLY:**													
	Burner			O					O				3	D
04	**VENTILATING SYSTEM:**													
	Fan Assembly							O	O					
05	**EXHAUST SYSTEM:**													
	Roof Jack Assembly				F			F	F	F				E

Section III. SPECIAL TOOL AND SPECIAL TEST EQUIPMENT REQUIREMENTS

Reference code	Maintenance level	Nomenclature	Tool number
1-D	O	Level	FSN 5210-239-0892
2-H	O	Level	FSN 5210-239-0892
3-C	O	Brush Wire Scratch	FSN 7920-291-5815

Section IV. REMARKS

Reference Code	Remarks
A-D	Adjust leveler bolts
B-D	Adjust is bending the support bracket to level the control valve
C-I	Fabricate
D-C	Clean burner with wire brush
E-D	Correction of faulty drafts.

APPENDIX C
REPAIR PARTS AND SPECIAL TOOLS LIST

Section I. INTRODUCTION

C-1. Scope

This index lists repair parts, special tools, test and support equipment required for the performance of organizational, direct support maintenance of the heater.

C-2. General

This Repair Parts and Special Tools List is divided into the following sections:

a. Repair Parts-Section II. A list of repair parts authorized for the performance of maintenance at the organizational level in figure and item number sequence.

b. Special Tools, *Test and Support Equipment-Section III.* Not applicable.

c. Repair Parts-Section IV. A list of repair parts authorized for the performance of maintenance at the direct support level in figure and item number sequence.

d. Special Tools, Test and Support Equipment-Section V. Not applicable.

e. Federal Stock Number and Reference Number Index-Section VI. A list of Federal stock numbers in ascending numerical sequence, followed by a list of reference numbers appearing in all of the listings, in alpha-numeric sequence, cross-referenced to the illustration figure number and item number.

NOTE

Items not illustrated are cross-referenced to assembly group number.

C-3. Explanation of Columns

The following provides an explanation of columns in the tabular lists in sections II through IV.

a. Source, Maintenance, and Recoverability Codes (SMR).

NOTE

Common hardware items known to be readily available in Army supply channels are assigned Maintenance codes only. Source codes. Recoverability Codes, and Maintenance Allowances are not assigned this category.

(1) *Source code*. Indicates the selection status and source for the listed item. Source codes used are:

Code	*Explanation*
P	Repair parts which are stocked in or supplied from the GSA / I)SA, or Army supply system and authorized for use at indicated maintenance categories.
P2	Repair parts which are procured and stocked for insurance purposes because the combat or military essentially of the end item dictates that a minimum quantity be available in the supply system.
M	Repair parts which are not procured or stocked, but are to be manufactured in indicated maintenance levels.
A	Assemblies which are not procured or stocked as such, but are made up of two or more units. Such component units carry individual stock numbers and descriptions, are procured and stocked separately and can be assembled to form the required assembly at indicated maintenance categories.
X	Parts and assemblies which are not procured or stocked and the mortality of which normally is below that of the applicable end item or component. The failure of such part or assembly should result in retirement of the end item from the supply system.
X1	Repair parts which are not procured or stocked. The requirement for such items will be filled by use of the next higher assembly or component.
X2	Repair parts which are not stocked. The indicated maintenance category requiring such repair parts will attempt to obtain same through cannibalization. Where such repair parts are not obtainable through cannibalization, requirements will be requisitioned, with accompanying justification, through normal supply channels.
C	Repair parts authorized for local procurement, where such repair parts are not obtainable from local procurement, requirements will be requisitioned through normal supply channels accompanied by a supporting statement of nonavailability from local procurement.
G	Major assemblies that are procured with PEMA funds for initial issue only as exchange assemblies at DSU and GSU level. These assemblies will not be stocked above DS and GS level or returned to depot supply level.

(2) *Maintenance code*. Indicates the lowest category of maintenance authorized to install the listed item. The maintenance codes are:

Code	*Explanation*
O	Organizational maintenance
F	Direct support maintenance

(3) *Recoverability code*. Indicates whether unserviceable items should be returned for recovery or salvage. Items not coded are expendable. Recoverability codes are:

Code	*Explanation*
R	Applied to repair parts (assemblies and components) which are considered economically reparable at direct and general support maintenance levels. When the maintenance capability to repair these items does not exist, they are normally disposed of at the GS level. When supply considerations dictated, some of these repair parts may be listed for automatic return to supply for depost level repair as set forth in AR 710-52. When so listed, they will be replaced by supply on an exchange basis.
S	Repair parts and assemblies which are economically reparable at DSU and GSU activities and which normally are furnished by supply on an exchange basis. When items are determined by a GSU to be uneconomically reparable, they will be evacuated to a deport for evaluation and analysis before final disposition.
T	High dollar value recoverable repair parts which are subject to special handling and are issued on an exchange basis. Such repair parts normally are repaired or overhauled at depot maintenance activities.
U	Repair parts specifically selected for salvage by reclamation units because of precious metal content, critical materials, or high dollar value reusable casings or castings.

b. Federal Stock Number. Indicates the Federal stock number assigned to the item and will be used for requisitioning purposes.

c. Description. Indicates the Federal item name and any additional description of the item required. Assembly components and subassemblies are indented under major assemblies. A part number or other reference number is preceded by the applicable 5-digit Federal supply code for manufacturers in parenthesis. Repair parts quantities included in kits and sets are shown in front of the repair part name. Material required for manufacture or fabrication is identified.

d. Unit of A Measure (U/M). A two-character alphabetic abbreviation indicating the amount or quantity of the item upon which the allowances are based, e.g., ft, ea, pr. etc.

e. Quantity Incorporated in Unit. Indicates the quantity of the item used in the assembly group. A "V" appearing in this column in lieu of a quantity indicates that a definite quantity cannot be indicated (e.g., shims. spacers, etc.)

f. Fifteen-Day Organizational Maintenance Allowance.

(1) The allowance columns are divided into four subcolumns. Indicated in each subcolumn opposite the first appearance of each item is the total quantity of the items authorized for the number of equipments supported. Subsequent appearances of the same item will have the letters "REF" in the allowance column. To locate the referenced item, locate the FSN or reference number in the index. The earliest figure and item number is the referenced item. Items authorized for use as required but not for initial stockage are identified with an asterisk in the allowance column.

(2) The quantitative allowance for organizational level of maintenance represents one initial prescribed load for a 15-day period for the number of equipments supported. Units authorized additional prescribed loads, multiply the number of prescribed loads by the quantity in the appropriate density column to determine the number of repair parts authorized.

(3) To determine allowances when supporting more than 100 of these equipments; First, divide the number of equipments supported by 100 by moving the decimal two spaces left; second, multiply the result by the quantity in the 51-100 density column. Example. authorized allowance for 51-100 equipments is 12; for 140 equipments, multiply 12 by 1.40 or 16.80 rounded off to 17 parts required.

(4) Subsequent changes to allowances will be limited as follows: No change in the range of items is authorized. If additional items are considered necessary. recommendation should be forwarded to the U.S. Army Mobility Equipment Command for exception or revision to the allowance list. Revisions to the range of items authorized will be made by the U.S. Army Mobility Equipment Command based upon engineering experience, demand data, or TAERS information.

g. Thirty-Day DS Maintenance Allowances.

(1) The allowance columns are divided into three subcolumns. Indicated in each subcolumn, opposite the first appearance of each item, is the total quantity of items authorized for the number of equipments supported. Subsequent appearances of the same item will have the letters "REF" in the applicable allowance column. To locate the referenced item locate the index. The earliest figure and item number is the referenced item. Items authorized for use as required but not for initial stockage are identified with an asterisk in the allowance column.

(2) The quantitative allowances for DS level of maintenance will represent initial stockage for a 30-day period for the number of equipments supported.

(3) To determine allowances when supporting more than 100 of these equipments. First, divide the number of equipments supported by 100 by moving the decimal two places left. Second, multiply the result by the quantity in the 51-100 density column. Example, authorized allowance for 51-100 equipments is 40; for 150 equipments multiply 40 by 1.50 or 60 parts required.

h. One-Year Allowance Per 100 Equipments/ Contingency Planning Purposes. Indicates opposite the first appearance of

each item the total quantity required for distribution and contingency planning purposes. The range of items indicates total quantities of all authorized items required to provide for adequate support of 100 equipments for one year. Subsequent appearances of the same item will have the letters "REF" in the allowance column.

i. Illustration. This column is divided as follows:

(1) *Figure number*. Indicates the figure number of the illustration in which the item is shown.

(2) *Item number*. Indicates the callout number used to reference the item in the illustration.

C-4. Special Information

a. Repair parts mortality has been based on 2000 hours operation per year.

b. Parts which require manufacture or assembly at a category higher than that authorized for installation will indicate in the source column the high category.

c. Action change codes indicated in the left hand margin of the listing page denote the following: (Applicable to revision or change only)

N--indicates an added item not included in previous publications.
C--Indicates a change in data.
F--Indicates a change in FSN only.

d. The same illustrations are used to illustrate the repair parts and special tools listed in both organizational maintenance section and direct support maintenance section.

C-5. How to Locate Repair Parts

a. When Federal Stock Number or Reference Number is Unknown:

(1) *First*. Using the table of contents determine the assembly group within which the repair part belongs. This is necessary since illustrations are prepared for assembly groups, and listings are divided into the same groups.

(2) *Second*. Find the illustration covering the assembly group to which the repair part belongs.

(3) *Third*. Identify the repair part on the illustration and note the illustration figure and item number of the repair part.

(4) *Using the Repair Parts Listings*. find the assembly group to which the repair part belongs and locate the illustration figure and item number noted on the illustration.

b. When Federal Stock Number or Reference is known:

(1) *First*. Using the Index of Federal Stock Numbers and Reference Numbers find the pertinent Federal stock number or reference number. This index is in ascending FSN sequence followed by a list of reference numbers in alpha-numeric sequence, cross-referenced to the illustration figure number and item number.

(2) *Second*. Using the Repair Parts Listing, find the assembly group of the repair part and the illustration figure number and item number referenced in the Index of Federal Stock Numbers and Reference numbers.

c. When the Federal stock number or reference number is known and the repair part is not illustrated:

(1) *First*. Using the Index of Federal Stock Numbers and Reference Numbers find the pertinent Federal stock number or reference number in the section titled "Items Not Illustrated" and note the group number. This section is in ascending FSN sequence followed by a list of reference numbers in alpha-numeric sequence, cross-referenced to assembly group number.

(2) *Second*. Using the Table of Contents. locate the assembly group number and page number.

(3) *Third*. Using the applicable group number and page number, locate the pertinent stock number or reference number in the Repair Parts listing. Items which are not illustrated are listed at the end of the assembly group to which they belong.

C-6. Abbreviations

Abbreviations	*Explanation*
in.	Inch(es)
lg.	Long
mtg	mounting
No.	Number(s)
thd	thread(s)

C-7. Federal Supply Codes for Manufacturers

Code	*Manufacturer*
21122	Pioneer Mfg. Corp.
24617	General Motors Corp.
48745	Preway Inc.
60380	Torrington Co., The
75543	Lavelle Rubber Co.
76871	Ohio Nut and Bolt Co.
81349	Military Specifications Promulgated by Standardization Div. Directorate of Logistic services
91494	Controls Co. Of American heating & Air Conditioning Div.
96906	Military Standards Promulgated by Standardization. Div. Directorate of Logistic Service.

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REF NUMBER & MFR CODE	USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 15-DAY ORGANIZATIONAL MAINTENANCE ALW (a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	(7) ILLUSTRATION (a) FIG NO.	(b) ITEM NO.
		SECTION II - REPAIR PARTS FOR ORGANIZATIONAL MAINTENANCE GROUP 01 - HOUSING									
P 0	4520-459-7224	GRILLE: DRUM TOP T14716 (48745)		EA	1	*	*	*	*	C1	1
0	5305-988-1725	SCREW, MACHINE: GRILLE AND OUTER CASE MTG, 1/4-20 THD SIZE, 3/4 IN. LG MS35206-281 (96906)		EA	8					C1	2
0	5310-982-4938	NUT, PLAIN, SOUARE: GRILLE AND OUTER CASE MTG, 1/4-20 THD SIZE MS27040-10 (96906)		EA	10					C1	3
0	5310-012-1637	WASHER, LOCK: GRILLE AND OUTER CASE MTG, 1/4 IN. SCREW SIZE MS35337-25 (96906)		EA	10					C1	4
X20	4520-874-3192	CASE, OUTER Y4335-3 (48745)		EA	1					C1	5
X20	4520-874-0437	LEG, CASE T9456-2 (48745)		EA	4					C1	6
0	5305-988-1723	SCREW, MACHINE: 1/4-20 THD SIZE, 1/2 IN. LG, CADMIUM OR ZINC PLATED M535206-279 (96906)		EA	8					C1	7
X20	4520-874-0453	ECONOMIZER Y6524-1 (48745)		EA	1					C1	8
P 0	4520-874-0428	DOOR ASSEMBLY, DRUM Y12370 (48745)		EA	1	*	*	*	*	C1	10
X1		DOOR AND BUSHING Y4283 (48745)		EA	1					C1	11
0	5305-010-2914	SETSCREW: LUG 191919 (24617)		EA	1					C1	12
X20		LUG: DRUM DOOR HANDLE Z3248 (48745)		EA	1					C1	13
P 0	4520-874-0464	HANDLE: DRUM DOOR Z3369 (48745)		EA	1	*	*	*	*	C1	14
P 0	5315-010-4671	PIN, HINGE: DRUM DOOR MS90710-17 (96906)		EA	1	*	*	*	*	C1	15
0	5305-984-6211	SCREW, MACHINE: DOOR AND HINGE MTG, NO.10-24 THD SIZE, 5/8 IN.LG MS35206-264 (96906)		EA	2					C1	16
P 0	5340-411-3757	HINGE, LOWER: DRUM DOOR T14778 (48745)		EA	1	*	*	*	*	C1	17
P 0	5340-929-8178	HINGE, UPPER: DRUM DOOR T14777 (48745)		EA	1	*	*	*	*	C1	18
0	5310-043-2226	WASHER, LOCK: DRUM DOOR AND HINGE MTG, NO. 10 SCREW SIZE MS35338-24 (96906)		EA	2					C1	19
0	5310-982-4937	NUT, PLAIN, SQUARE: DRUM DOOR AND HINGE MTG, NO. 10-24 THD SIZE MS27040-8 (96906)		EA	2					C1	20
P 0	4520-932-7331	LEVELER FT2724 (76871)		EA	4	*	*	*	*	C1	22
X20		BRACE T14865 (48745)		EA	2					C1	25
0	5305-010-0766	SCREW, SELF-TAPPING: LEG MTG, NO. 10 SCREW SIZE, 3/4 IN. LG MS24637-58 (96906)		EA	4					C1	26

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REF NUMBER & MFR CODE	USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 15-DAY ORGANIZATIONAL MAINTENANCE ALW (a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	(7) ILLUSTRATION (a) FIG NO.	(b) ITEM NO.
		GROUP 02 - FUEL SYSTEM									
P 0	4520-874-0429	TUBE ASSEMBLY, SIPHON Y12172 (48745)		EA	1	*	*	*	*	C2	1
0	5305-054-6664	SCREW, MACHINE: SIPHON TUBE, NO. 8-32 X 1/8 IN. LG MS51957-39 (96906)		EA	2					C2	2
X20		BOTTOM: SIPHON TUBE T16388 (48745)		EA	1					C2	3
P 0	4520-989-3340	STRAINER: SIPHON TUBE Z3349 (48745)		EA	1	*	*	*	*	C2	4
P 0	5340-983-1120	SPRING: SIPHON TUBE D14034 (48745)		EA	1	*	*	*	*	C2	5
P 0	4520-459-7225	PLUNGER ASSEMBLY: SIPHON TUBE Y12169 (48745)		EA	1	*	*	*	*	C2	6
MF0		LINE, FUEL: BURNER WZ3371 (48745) MANUFACTURE FROM:		EA	1					C3	1
0	4710-278-8726	LINE, 13 1/2 IN.LGC3									
0	4730-902-8990	NUT, FLARED, 2 EA		EA						C3	
MF0		LINE, FUEL: STANDPIPE WZ3372 (48745) MANUFACTURE FROM:		EA	1					C3	2
0	4710-278-8726	LINE, 18 IN.LG								C3	
0	4730-902-8990	NUT, FLARED, 2 EA								C3	
0	5310-982-4938	NUT, PLAIN, SQUARE: SIPHON DRAIN MTG, NO. 10-24 THD SIZE MS270- 10 (96906)		EA	2					C3	3
0	5310-012-1637	WASHER, LOCK: SIPHON DRAIN MTG, NO. 10 SCREW SIZE MS35338-25 (96906)		EA	2					C3	4
0	5305-988-1723	SCREW, MACHINE: SIPHON DRAIN MTG, 1/4-20 THD SIZE, 1/2 IN.LG MS35206-279 (96906)		EA	2					C3	5
X20		SIPHON, DRAIN Y4363 (48745)		EA	1					C3	6
0	5310-982-4938	NUT, PLAIN, SQUARE: VALVE BRACKET MTG, 1/4-20 THD SIZE MS2704- 10 (96906)		EA	2					C3	7
0	5310-012-1637	WASHER, LOCK: VALVE TO BRACKET MTG, NO.10 SCREW SIZE MS35337-25 (96906)		EA	2					C3	8
0	5305-988-1725	SCREW, MACHINE: VALVE BRACKET MTG, NO.10-20 THD SIZE, 3/4 IN.LG MS35206-281 (96906)		EA	2					C3	9
0	5305-637-7678	BOLT, MACHINE: VALVE MTG, 5/16-18 THD SIZE, 1/2 IN.LG MS16208-26 (96906)		EA	2					C3	10
0	5310-407-9566	WASHER, LOCK: VALVE MTG, 5/16 IN. SCREW SIZE MS35338-45 (96906)		EA	2					C3	11
X20	4520-874-0406	BRACKET, VALVE T14790 (48745)		EA	1					C3	12
0	4730-639-9676	ELBOW, PIPE TO TUBE: TUBE ASSEMBLY TO CONTROL VALVE 118755 (24617)		EA	1					C3	13

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REF NUMBER & MFR CODE	USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 15-DAY ORGANIZATIONAL MAINTENANCE ALW (a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	(7) ILLUSTRATION (a) FIG NO.	(b) ITEM NO.
		CONNECTOR: FLARED TUBE, 3/8 IN., 1/4 IN. MALE PIPE THD, BRASS, TUBE ASSEMBLY TO CONTROL VALVE MS39158-5 (96906)		EA	2					C3	14
P 0	4520-459-7227	VALVE ASSEMBLY 340YR80552 (91494)		EA	1	*	*	*	*	C3	15
P 0	4520-874-0416	VALVE ASSEMBLY 13208E6211-2 (97403) (ISSUE UNTIL STOCK IS EXHAUSTED, THEN USE FSN 4520-983-6375)		EA	1	*	*	*	*	C3	15
P 0	4520-983-6473	STRAINER: VALVE K12870 (91J94)		EA	1	*	*	*	*	C3	16
X20		CAP, STRAINER 62265 (91494)		EA	1					C3	16A
P 0	5330-458-1927	GASKET: VALVE K12871 (48745)		EA	1	*	*	*	*	C3	17
0	5310-982-4938	NUT, PLAIN, SQUARE: FRAME MTG, NO.10-24 THD SIZE MS27040-10 (96906)		EA	8					C3	18
0	5310-012-1637	WASHER, LOCK: FRAME MTG, NO.10 SCREW SIZE MS35338-25 (96906)		EA	14					C3	19
0	5305-988-1723	SCREW, MACHINE: FRAME MTG, 1/4-20 THD SIZE, 1/2 IN. LG MS35206-279 (96906)		EA	8					C3	20
X		FRAME Y10894 (48745)		EA	1					C3	21
		GROUP 03 - BURNER ASSEMBLY									
0	4730-278-3039	PLUG PIPE: TEE, SQUARE HEAD, 3/8-18 THD SIZE K12752 (48745)		EA	1					C4	1
X20	4730-277-5593	BUSHING, REDUCER: ADAPTER TO TEE, ONE END MALE, 3/8-18 THD SIZE, OTHER END FEMALE, 1/4-18 THD SIZE K12750 (48745)		EA	1					C4	2
X20		TEE, PIPE: LINE TO BURNER ASSEMBLY, ALL ENDS FEMALE1/4-18 THD SIZE K12750 (48745)		EA	1					C4	3
X20		NIPPLE, PIPE: TEE TO BURNER ASSEMBLY WVK14222 (48745)		EA	1					C4	4
0	5305-017-1420	SCREW, SELF-TAPPING: POT BURNER ASSEMBLY MTG, NO.10 SCREW SIZE, 3/8 IN.LG MS24637-33 (96906)		EA	4					C4	5
P 0	4520-874-0422	RING, HALF, TOP T14784 (48745)		EA	2	*	*	*	*	C4	6
P 0	4520-874-0430	RING, LOW, FIRE Y10886-1 (48745)		EA	2	*	*	*	*	C4	7
M 0		WICK, ASBESTOS VK12767 (48745)		EA	1					C4	8
0	5330-190-9979	MANUFACTURE FROM: ASBESTOS, 24 IN.REQUIRED								C4	

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REF NUMBER & MFR CODE	USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 15-DAY ORGANIZATIONAL MAINTENANCE ALW (a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	(7) ILLUSTRATION (a) FIG NO.	(b) ITEM NO.
		GROUP 04 - VENTILATING SYSTEM									
P 0	4520-999-0675	FAN ASSEMBLY 445-2 (48745) (ISSUE UNTIL STOCK IS EXHAUSTED THEN USE FAN ASSEMBLY, FSN 4520-459-6819)		EA	1	*	*	*	*	C5	
P 0	4520-921-6967	FAN ASSEMBLY M650 (21122) (ISSUE UNTIL STOCK IS EXHAUSTED, THEN USE FAN ASSEMBLY, FSN 4520-459-6819		EA	1	*	*	*	*	C5	
P 0	4520-459-6819	FAN ASSEMBLY Y12378 (48745)		EA	1	*	*	*	*	C5	
X1		ADAPTER ASSEMBLY Y6989-2 (48745)		EA	1					C5	1
X20		NUT, KNURLED: COLLAR MTG Z2622 (48745)		EA	2					C5	2
P 0	4520-990-2405	CORD TYPESJ300V (88690) (NO.16, 3 COND, 10 FT)		EA	1	*	*	*	*	C5	3
P 0	4520-983-6478	SWITCH: SPST K9328 (48745)		EA	1	*	*	*	*	C5	4
X20	5310-266-4461	NUT, SELF-LOCKING: MOTOR MTG, NO.8-32 THD SIZE MS21045-08 (96906)		EA	4					C5	5
0	5310-215-7715	WASHER,FLAT: MOTOR MTG, NO. 8 SCREW SIZE VK6746 (02279)		EA	8					C5	6
X1		GUARD, MOTOR K8072 (39766)		EA	1					C5	7
P 0	4520-983-6475	MOTOR ASSEMBLY TL306 (50133)		EA	1	*	*	*	*	C5	8
0	5305-044-6623	SETSCREW: FAN MTG 446623 (2J617)		EA	1					C5	9
X1	2930-580-9526	FAN P1034-4 (60380)		EA	1					C5	10
X1		COLLAR ASSEMBLY Y8065-2 (48745)		EA	1					C5	11
X20		GROMMET RUBBER 914 (75543)		EA	4					C5	12
X20		NUT, PLAIN, HEXAGON: MOTOR GUARD MOUNTING Z2613 (48745)		EA	4					C5	13
0	5306-012-6358	BOLT CARRIAGE: COLLAR MTG 126358 (24617)		EA	2					C5	14
P 0	5935-823-0213	PLUG 2 PRONG K12780 (48745)		EA	1	*	*	*	*	C5	15
X1		ADAPTER ASSEMBLY Y12312 (48745)		EA	1					C5	1
0	5310-828-8189	NUT,PLAIN, WING MS35425-41 (96906)		EA	2					C5	2
M 0		WIRE: FAN ASSEMBLY K14209 (48745) MANUFACTURE FROM: WIRE 10 FT REQUIRED MILC332TYPEC002MGF2-16-0335 (81349)		FT						C5	3
0										C5	

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REF NUMBER & MFR CODE	USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 15-DAY ORGANIZATIONAL MAINTENANCE ALW (a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	(7) ILLUSTRATION (a) FIG NO.	(b) ITEM NO.
P 0	4520-983-6478	SWITCH: SPST FAN ASSEMBLY K9328 (48745)		EA	1	*	*	*	*	C5	4
P 0	5310-982-4974	NUT, SELF-LOCKING, HEXAGON: FAN ASSEMBLY MS21045-08 (96906)		EA	4	*	*	*	*	C5	5
0	5310-167-0765	WASHER, FLAT: FAN ASSEMBLY MS63040-3 (96906)		EA	8					C5	6
0		GROMMET, RUBBER: FAN ASSEMBLY MS35490-28 (96906)		EA	4					C5	7
X1		HOUSING, FAN Y12311 (48745)		EA	1					C5	8
P 0	6105-409-9229	MOTOR ASSEMBLY: FAN 7163-1879 (81958)		EA	1	*	*	*	*	C5	9
X1		FAN BLADE: FAN ASSEMBLY N1036-4 (60380)		EA	1					C5	10
0	5310-081-4219	WASHER, FLAT: FAN ASSEMBLY M527183-12 (96906)		EA	2					C5	11
0	5310-012-0379	WASHER, LOCK: FAN ASSEMBLY M535337-26 (96906)		EA	2					C5	12
0	5306-053-8381	BOLT, CARRIAGE MS35751-40 (96906)		EA	2					C5	13
P 0	5935-823-0213	PLUG, TWO PRONG: FAN ASSEMBLY K12780 (48745)		EA	1	*	*	*	*	C5	14
		GROUP 05 - EXHAUST SYSTEM									
P 0	4520-273-1243	PIPE, STOVE: 6 IN. DIA, 24 IN. LG MILP551 (81349)		EA	8	*	*	*	*	C6	12
P 0	4520-990-2395	PIPE, TEE, REGULATOR Y11345 (48745)		EA	1	*	*	*	*	C6	13
P 0	4520-990-2391	ELBOW: 6 IN. DIA MILP551STYLE1 (81349)		EA	1	*	*	*	*	C6	14
P 0	4520-982-9474	CAP, END 13208E6216 (97403) (ISSUE FSN 4520-982-9474 CAP AND FSN 4520-990-2391, ELBOW, UNTIL STOCK IS EXHAUSTED, THEN USE P/N 14226 (48745), ELBOW)		EA	1	*	*	*	*	C6	15
P 0	4520-982-9479	REGULATOR Y10900 (48745)		EA	1	*	*	*	*	C6	16
0	5310-982-4937	NUT, PLAIN, SQUARE: TEE PIPE REGULATOR MTG, NO.10-24 THD SIZE MS27040-8 (96906)		EA	1					C6	17

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION / REF. NUMBER & MFR CODE / USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30 DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30 DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 1-YR ALW PER 100 EQUIP CNTGY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUS-TRATION (a) FIG. NO.	(b) ITEM NO.
		SECTION IV - REPAIR PARTS FOR DIRECT SUPPORT MAINTENANCE GROUP 01 - HOUSING												
P 0	4520-459-7224	GRILLE: DRUM TOP T14716 (48745)	EA	1	*	*	*				*	*	C1	1
0	5305-988-1725	SCREW, MACHINE: GRILLE AND OUTER CASE MTG, 1/4-20 THD SIZE, 3/4 IN. LG MS35206-281 (96906)	EA	8									C1	2
O	5310-982-4938	NUT, PLAIN, SOUARE: GRILLE AND OUTER CASE MTG, 1/4-20 THO SIZE MS27040-10 (96906)	EA	10									C1	3
O	5310-012-1637	WASHER, LOCK: GRILLE AND OUTER CASE MTG, 1/4 IN. SCREW SIZE MS35337-25 (96906)	EA	10									C1	4
X20	4520-874-3192	CASE, OUTER Y4335-3 (48745)	EA	1									C1	5
X20	4520-874-0437	LEG, CASE T9456-2 (48745)	EA	4									C1	6
0	5305-988-1723	SCREW, MACH(NL: 1/4-20 THD SIZE, 1/2 IN, LG, CADMIUM OR ZINC PLATED MS3206-279 (96906)	EA	8									C1	7
X20	4520-874-0453	ECONOMIZER Y6524-1 (48745)	EA	1									C1	8
X2F		BODY, DRUM Y11339 (48745)	EA	1									C1	9
P 0	4520-874-0428	DOOR ASSEMBLY, DRUM Y12370 (48745)	EA	1	*	*	*				*	*	C1	10
X1		DOOR AND BUSHING Y4283 (48745)	EA	1									C1	11
0	5305-010-2914	SETSCREW: LUG 191919 (24617)	EA	1									C1	12
X20		LUG: DRUM DOOR HANDLE Z3248 (48745)	EA	1									C1	13
P 0	4520-874-o464	HANDLE: DRUM DOOR Z3369 (48745)	EA	1	*	*	*				*	*	C1	14
P 0	5315-010-4671	PIN, HINGE: DRUM DOOR MS90710-17 (96906)	EA	1	*	*	*				*	*	C1	15
0	5305-984-6211	SCREW, MACHINE: DOOR AND HINGE MTG, NO.10-24 THD SIZE, 5/8 IN.LG MS35206-264 (96906)	EA	2									C1	16
P O	5340-411-3757	HINGE, LOWER: DRUM DOOR T14778 (48745)	EA	1	*	*	*				*	*	C1	17
P 0	5340-929-8178	HINGE, UPPER: DRUM DOOR T14777 (48745)	EA	1	*	*	*				*	*	C1	18
0	5310-043-2226	WASHER, LOCK: DRUM DOOR AND HINGE MTG NO. 10 SCREW SIZE MS35338-24 (96906)	EA	2									C1	19
0	5310-982-4937	NUT, PLAIN, SQUARE: DRUM DOOR AND HINGE MTG, NO. 10-24 THD SIZE MS27040-8 (96906)	EA	2									C1	20
X2F	4520-874-0421	BOTTOM, DRUM T9566 (48745)	EA	1									C1	21

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P O	4520-932-7331	LEVELER FT2724 (76871)	EA	4	*	*	*				*	*	C1	22
X2F	4520-874-3194	BASE ASSEMBLY Y10855 (48745)	EA	1									C1	23
X2F	5305-017-1420	SCREW, SELF-TAPPING: DRUM MTG, NO. 10 SCREW SIZE, 3/8 IN. LG MS24637-33 (96906)	EA	8									C1	24
X20		BRACE T14865 (48745)	EA	2									C1	25
0	5305-010-0766	SCREW, SELF-TAPPING: LEG MTG, NO. 10 SCREW SIZE, 3/4 IN. LG MS24637-58 (96906)	EA	4									C1	26
		GROUP 02 - FUEL SYSTEM												
P 0	4520-874-0429	TUBE ASSEMBLY, SIPHON Y12172 (48745)	EA	1	*	*	*				*	*	C2	1
0	5305-054-6664	SCREW, MACHINE: SIPHON TUBE, NO. 8-32 X 1/8 IN. LG MS51957-39 (96906)	EA	2									C2	2
X20		BOTTOM: SIPHON TUBE T16388 (48745)	EA	1									C2	3
P 0	4520-989-3340	STRAINER SIPHON TUBE Z3349 (48745)	EA	1	*	*	*				*	*	C2	4
P 0	5340-983-1120	SPRING: SIPHON TUBE D14034 (48745)	EA	1	*	*	*				*	*	C2	5
P 0	4520-459-7225	PLUNGER ASSEMBLY: SIPHON TUBE Y12169 (48745)	EA	1	*	*	*				*	*	C2	6
MFO		L INE, FUEL BURNER WZ3371 (48745) MANUFACTURE FROM:	EA	1									C3	1
0	4710-278-8726	LINE, 13 1/2 IN. LG											C3	
0	4730-902-8990	NUT, FLARED, 2 EA											C3	
MFO		LINE, FUEL: STANDPIPE WZ3372 (48745) MANUFACTURE FROM:	EA	1									C3	2
0	4710-278-8726	LINE, 18 IN. LG											C3	
0	4730-902-8990	NUT, FLARED, 2 EA											C3	
0	5310-982-4938	NUT, PLAIN, SQUARE: SIPHON DRAIN MTG, NO. 10-24 THD SIZE MS27040-10 (96906)	EA	2									C3	3
0	5310-012-1637	WASHER, LOCK: SIPHON DRAIN MTG, NO. 10 SCREW SIZE MS35338-25 (96906)	EA	2									C3	4
0	5305-988-1723	SCREW, MACHINE: SIPHON DRAIN MTG, 1/4-20 THD SIZE, 1/2 IN. LG MS35206-279 (96906)	EA	2									C3	5
X20		SIPHON, DRAIN Y4363 (48745)	EA	1									C3	6
0	5310-982-4938	NUT, PLAIN, SQUARE: VALVE BRACKET MTG, 1/4-20 THD SIZE MS2704-10 (96906)	EA	2									C3	7
0	5310-012-1637	WASHER, LOCK: VALVE TO BRACKET MTG, NO. 10 SCREW SIZE MS35337-25 (96906)	EA	2									C3	8
0	5305-988-1725	SCREW, MACHINE: VALVE BRACKET MTG, NO. 10-20 THD SIZE 3/4 IN. LG MS35206-281 (96906)	EA	2									C3	9

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION USABLE ON CODE REF. NUMBER & MFR CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30 DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30 DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 1-YR ALW PER 100 EQUIP CNTGY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUS-TRATION (a) FIG. NO.	(b) ITEM NO.
0	5305-637-7678	BOLT, MACHINE: VALVE MTG, 5/16-18 THD SIZE, 1/2 IN. LG MS16208-26 (96906)	EA	2									C3	10
0	5310-407-9566	WASHER, LOCK: VALVE MTG, 5/16 IN. SCREW SIZE MS35338-45 (96906)	EA	2									C3	11
X20	4520-874-0406	BRACKET, VALVE T14790 (48745)	EA	1									C3	12
0	473o-639-9676	ELBOW, PIPE TO TUBE: TUBE ASSEMBLY TO CONTROL VALVE 118755 (24617)	EA	1									C3	13
0		CONNECTOR: FLARED TUBE, 3/8 IN., 1/4 IN. MALE PIPE THD, BRASS, TUBE ASSEMBLY TO CONTROL VALVE MS39158-5 (96906)	EA	2									C3	14
P 0	4520-459-7227	VALVE ASSEMBLY 340YR80552 (91494)	EA	1	*	*	*				*	*	C3	15
P 0	4520-874-0416	VALVE ASSEMBLY 13208E6211-2 (97403) (ISSUE UNTIL STOCK IS EXHAUSTED, THEN USE FSN 4520-983-6375)	EA	1	*	*	*				*	*	C3	15
P 0	4520-983-6473	STRAINER: VALVE K12870 (91494)	EA	1	*	*	*				*	*	C3	16
X20		CAP, STRAINER 62265 (91494)	EA	1									C3	16A
P 0	5330-458-1927	GASKET: VALVE K12871 (48745)	EA	1	*	*	*				*	*	C3	17
0	5310-982-4938	NUT, PLAIN, SQUARE: FRAME MTG, NO. 10-24 THD SIZE MS27040-10 (96906)	EA	8									C3	18
0	5310-012-1637	WASHER, LOCK: FRAME MTG, NO. 10 SCREW SIZE MS35338-25 (96906)	EA	14									C3	19
0	5305-988-1723	SCREW, MACHINE: FRAME MTG, 1/4-20 THD SIZE, 1/2 IN. LG MS352O6-279 (96906)	EA	8									C3	20
X		FRAME Y10894 (48745)	EA	1									C3	21
		GROUP 03 - BURNER ASSEMBLY												
0	4730-278-3039	PLUG PIPE: TEE, SQUARE HEAD, 3/8-18 THD SIZE K12752 (48745)	EA	1									C4	1
X20	4730-277-5593	BUSHING, REDUCER: ADAPTER TO TEE, ONE END MALE, 3/8-18 THD SIZE, OTHER END FEMALE, 1/4-18 THD SIZE K12750 (48745)	EA	1									C4	2
X20		TEE, PIPE: LINE TO BURNER ASSEMBLY, ALL ENDS FEMALE 1/4-18 THD SIZE K12750 (48745)	EA	1									C4	3
X20		NIPPLE, PIPE: TEE TO BURNER ASSEMBLY WVK14222 (48745)	EA	1									C4	4
0	5305-017-1420	SCREW, SELF-TAPPING: POT BURNER ASSEMBLY MTG, NO. 10 SCREW SIZE, 3/8 IN. LG MS24637-33 (96906)	EA	4									C4	5
P 0	4520-874-0422	RING, HALF, TOP T14784 (487C5)	EA	2	*	*	*				*	*	C4	6

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P 0	4520-874-0430	RING, LOW, FIRE Y10886-1 (48745)	EA	2	*	*	*				*	*	C4	7
M 0		WICK, ASBESTOS VK12767 (48745) MANUFACTURE FROM:	EA	1									C4	8
0	5330-190-9979	ASBESTOS, 24 IN. REQUIRED											C4	
		GROUP 04 - VENTILATING SYSTEM												
P 0	4520-999-0675	FAN ASSEMBLY 445-2 (48745) (ISSUE UNTIL STOCK IS EXHAUSTED, THEN USE FAN ASSEMBLY, FSN 4520-459-6819)	EA	1	*	*	*				*	*	C5	
P 0	4520-921-6967	FAN ASSEMBLY M650 (21122) (ISSUE UNTIL STOCK IS EXHAUSTED, THEN USE FAN ASSEMBLY, FSN 4520-459-6819)	EA	1	*	*	*				*	*	C5	
P 0	4520-459-6819	FAN ASSEMBLY Y12378 (48745)	EA	1	*	*	*				*	*	C5	
X1		ADAPTER ASSEMBLY Y6389-2 (48745)	EA	1									C5	1
X20		NUT, KNURLED: COLLAR MTG Z2622 (48745)	EA	2									C5	2
P 0	4520-990-2405	CORD TYPESJ300V (88690) (NO. 16, 3 COND, 10 FT)	EA	1	*	*	*				*	*	C5	3
P 0	4520-983-6478	SWITCH: SPST K9328 (48745)	EA	1	*	*	*				*	*	C5	4
X20	5310-266-4461	NUT, SELF-LOCKING: MOTOR MTG, NO. 8-32 THD SIZE MS21045-o8 (96906)	EA	4									C5	5
0	5310-215-7715	WASHER, FLAT: MOTOR MTG, NO. 8 SCREW SIZE VK6746 (02279)	EA	8									C5	6
X1		GUARD, MOTOR K8072 (39766)	EA	1									C5	7
P 0	4520-983-6475	MOTOR ASSEMBLY TL306 (50133)	EA	1	*	*	*	*			*	*	C5	8
0	5305-044-6623	SETSCREW: FAN MTG 446623 (24617)	EA	1									C5	9
X1	2930-580-9526	FAN P1034-4 (60380)	EA	1									C5	10
X1		COLLAR ASSEMBLY Y8065-2 (48745)	EA	1									C5	11
X20		GROMMET, RUBBER 914 (75543)	EA	4									C5	12
X20		NUT, PLAIN, HEXAGON: MOTOR GUARD MOUNTING Z2613 (48745)	EA	4									C5	13
0	5306-012-6358	BOLT, CARRIAGE: COLLAR MTG 126358 (24617)	EA	2									C5	14
P 0	5935-823-0213	PLUG, 2 PRO K12780 (487145)	EA	1	*	*	*				*	*	C5	15
X1		ADAPTER ASSEMBLY Y12312 (48745)	EA	1									C5	1
0	5310-828-8189	NUT, PLAIN WING MS35425-41 (96906)	EA										C5	2

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION / REF. NUMBER & MFR CODE	USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30 DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30 DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 1-YR ALW PER 100 EQUIP CNTGY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUS-TRATION (a) FIG. NO.	(b) ITEM NO.
M 0		WIRE: FAN ASSEMBLY K14209 (48745) MANUFACTURE FROM:		FT										C5	3
0		WIRE, 10 FT REQUIRED MILC3432TYPEC002MGF2-16-0335 (81349)												C5	
P 0	4520-983-6478	SWITCH: SPST.FAN ASSEMBLY K9328 (48745)		EA	1	*	*	*				*	*	C5	4
P 0	5310-982-4974	NUT, SELF-LOCKING, HEXAGON: FAN ASSEMBLY MS21045-08 (96906)		EA	4	*	*	*				*	*	C5	5
0	5310-167-0765	WASHER, FLAT: FAN ASSEMBLY MS63040-3 (96906)		EA	8									C5	6
0		GROMMET, RUBBER: FAN ASSEMBLY MS35490-28 (96906)		EA	4									C5	7
X1		HOUSING, FAN Y12311 (48745)		EA	1									C5	8
P 0	6105-4O9-9229	MOTOR ASSEMBLY: FAN 7163-1879 (81958)		EA	1	*	*	*				*	*	C5	9
X1		FAN BLADE: FAN ASSEMBLY N1036-4 (60380)		EA	1									C5	10
0	5310-081-4219	WASHER, FLAT: FAN ASSEMBLY MS27183-12 (96906)		EA	2									C5	11
0	5310-012-0379	WASHER, LOCK: FAN ASSEMBLY MS35337-26 (96906)		EA	2									C5	12
0	5306-053-8381	BOLT, CARRIAGE MS35751-40 (96906)		EA	2									C5	13
P 0	5935-823-0213	PLUG,TWO PRONG: FAN ASSEM. K12780 (48745)		EA	1	*	*	*				*	*	C5	14
		GROUP 05 - EXHAUST SYSTEM													
P F	4520-990-0676	ROOF JACK ASSEMBLY Y11360 (48745)		EA	1	*	*	*				*	*	C6	
P F	4520-874-0438	CAP, RAIN: ROOF JACK Y10902 (48745)		EA	2	*	*	*				*	*	C6	1
F		SCREW, MACHINE: RAIN CAP MTG, NO. 10 SCREW SIZE. 3/4 IN. LG MS35206-265 (96906)		EA	3									C6	2
P F	4520-763-0748	PIPE, RAIN CAP: ROOF JACK T6186 (48745)		EA	1	*	*	*				*	*	C6	3
X1		HOOD, TOP T6183 (48745)		EA	1									C6	4
X2F		STRAP, ANCHOR: ROOF JACK T6177 (48745)		EA	2									C6	5
X1		SHIELD PIPE, TOP T15447 (48745)		EA	1									C6	6
X1		SHIELD PIPE, BOTTOM T15440 (40745)		EA	1									C6	7
X2F		KNOB: ROOF JACK Z3197 (48745)		EA	2									C6	8
X2F		ESCUTCHEON Y10904 (48745)		EA	1									C6	9
X2F	5305-984-6208	SCREW, MACHINE: KNOB MTG NO.10-24 THD SIZE, 3/8 IN. LG MS35206-261 (96906)		EA	3									C6	10
X2F		DAMPER: ROOF JACK T6185-2 (48745)		EA	1									C6	11

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION USABLE ON CODE REF. NUMBER & MFR CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30 DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30 DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 1-YR ALW PER 100 EQUIP CNTGY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUS-TRATION (a) FIG. NO.	(b) ITEM NO.
P 0	4520-273-1243	PIPE, STOVE: 6 IN. DIA, 24 IN. LG MILP551 (81349)	EA	8	*	*	*				*	*	C6	12
P 0	4520-990-2395	PIPE, TEE, REGULATOR Y11345 (48745)	EA	1	*	*	*				*	*	C6	13
P 0	4520-990-2391	ELBOW: 6 IN.DIA MILP551STYLE1(81349)	EA	1	*	*	*				*	*	C6	14
P 0	4520-982-9474	CAP, END 13208E6216 (97403) (ISSUE FSN 4520-982-9474 CAP AND FSN 4520-990-2391, ELBOW, UNTIL STOCK IS EXHAUSTED. THEN USE P/N 14226 (48745), ELBOW)	EA	1	*	*	*				*	*	C6	15
P 0	4520-982-9479	REGULATOR Y10900 (48745)	EA	1	*	*	*				*	*	C6	16
0	5310-982-4937	NUT, PLAIN, SQUARE: TEE PIPE REGULATOR MTG, NO.10-24 THD SIZE MS27040-8 (96906)	EA	1									C6	17
X1	5670-874-0439	FLASHING T14792 (48745)	EA	1									C6	18
X1		COLLAR HALF 132086220 (97403)	EA	2									C6	19
X1		BUSHING, SPACER 13208E6221 (97403)	EA	2									C6	20
X2F		SCREEN 13208E6228 (97403)	EA	1									C6	21
X1		HOOD, REAR 13211E9830 (97403)	EA	1									C6	22
F	5315-234-1861	PIN, COTTER: ROOF JACK PIN3/32 IN DIA, 1/2 IN. LG MS24665-298 (96906)	EA	1									C6	23
X2F		PIN, STOVE PIPE: ROOF JACK Z3249 (48745)	EA	1									C6	24
X1		HOOD TOP T6183 (48745)	EA	1									C6	25

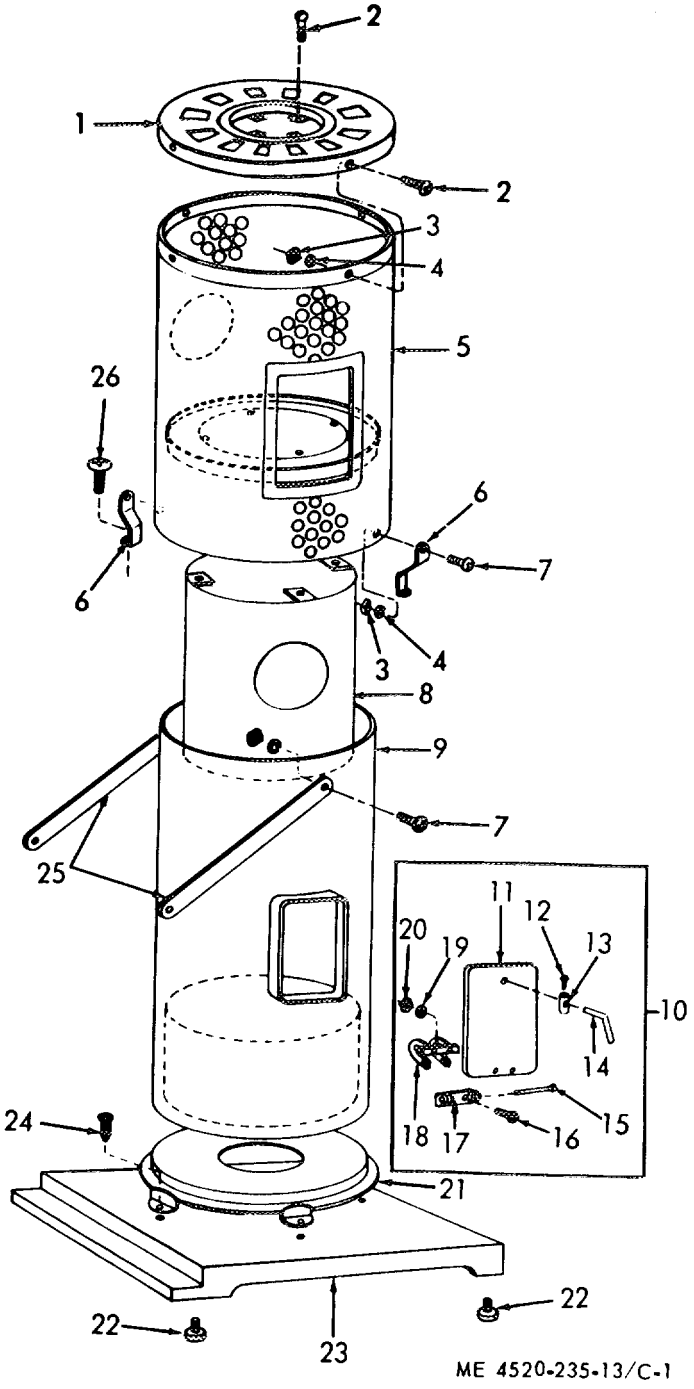


Figure C-1. Drum

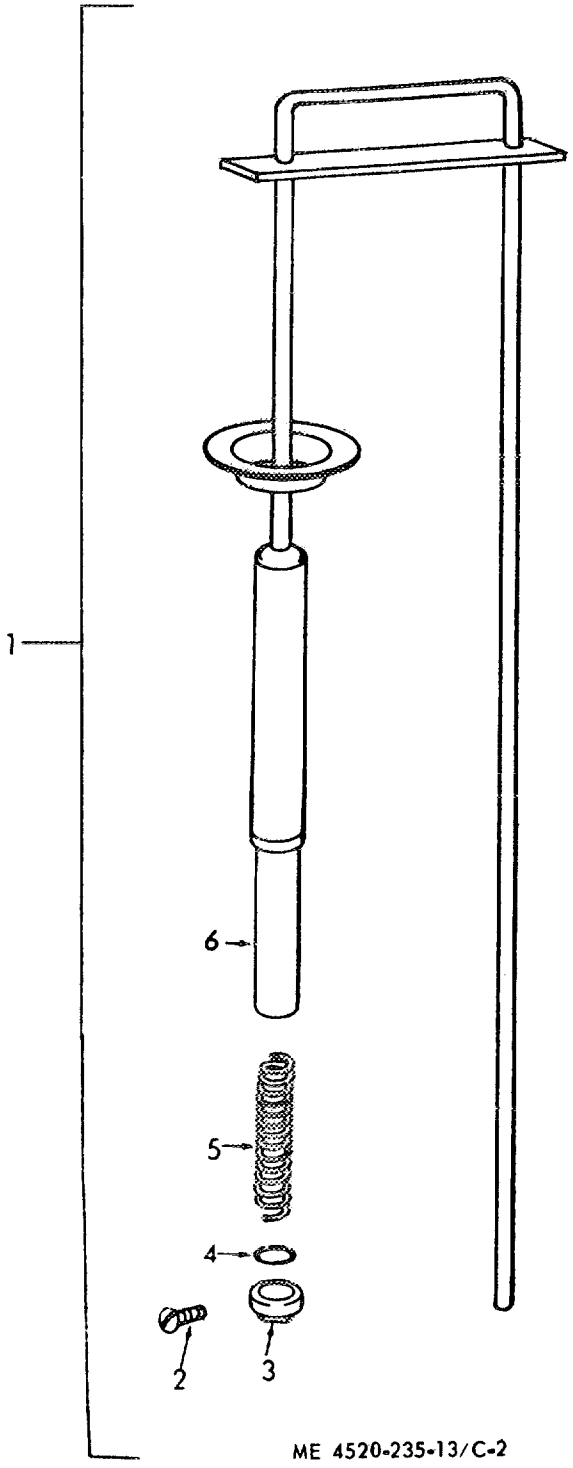
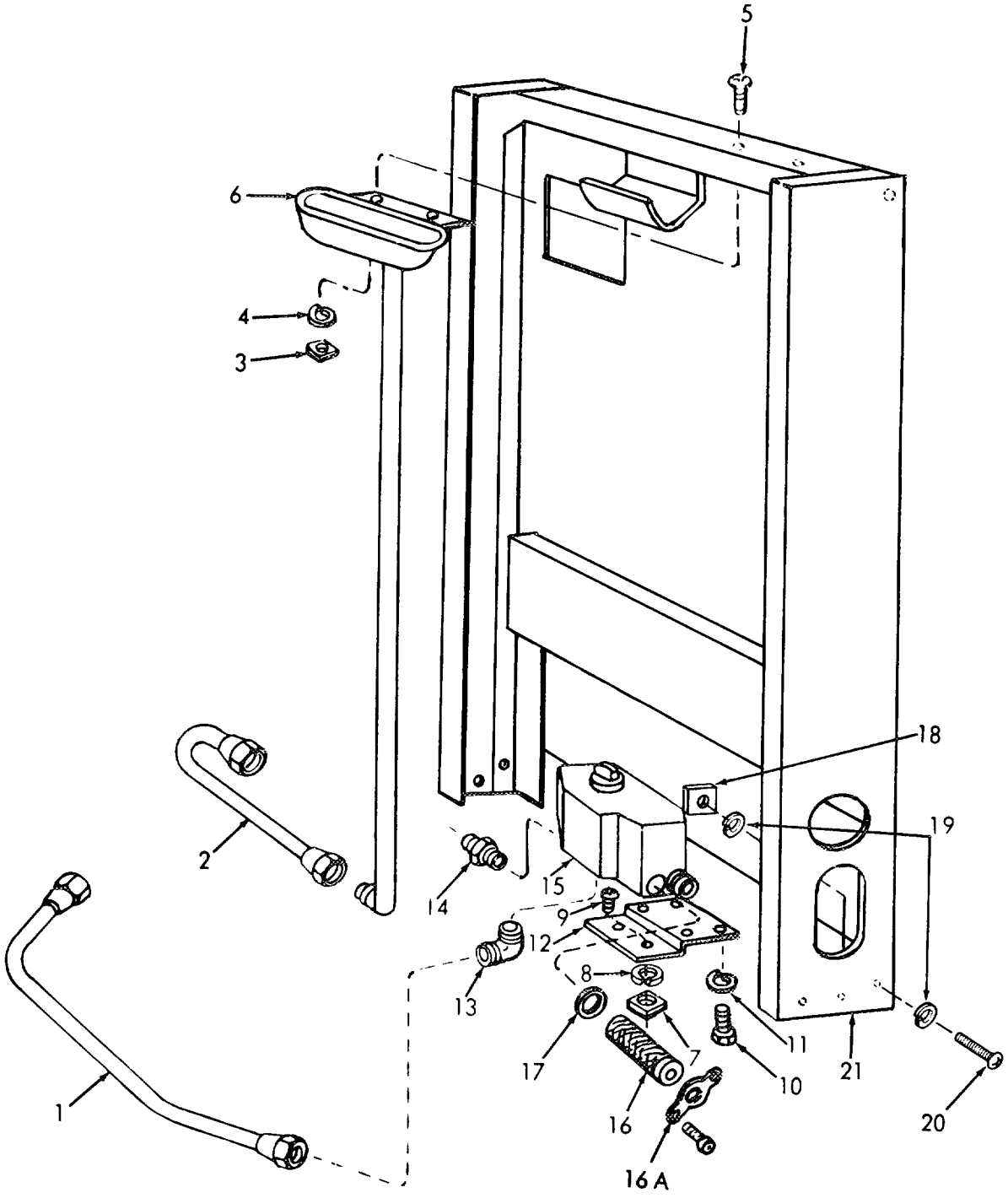


Figure C-2. Siphon



ME 4520-235-13/C-3

Figure C-3. Frame, Control Valve, Lines and Fittings

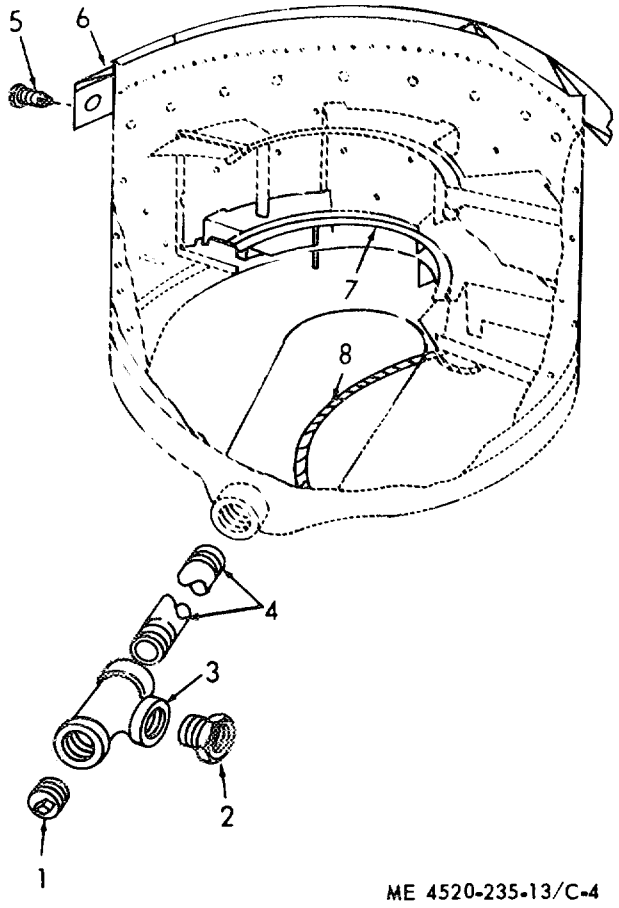


Figure C-4. Burner Pot and Fittings

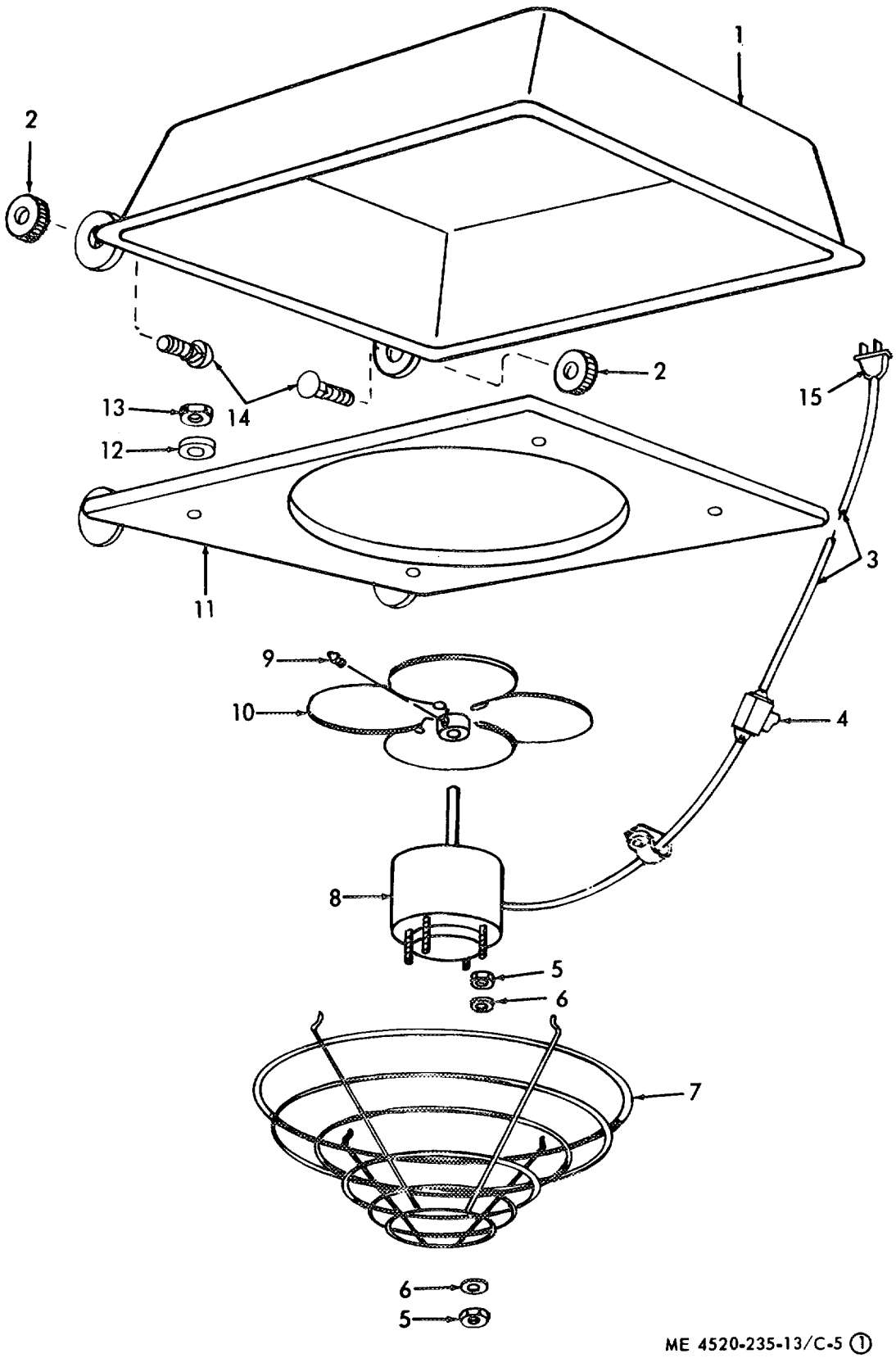
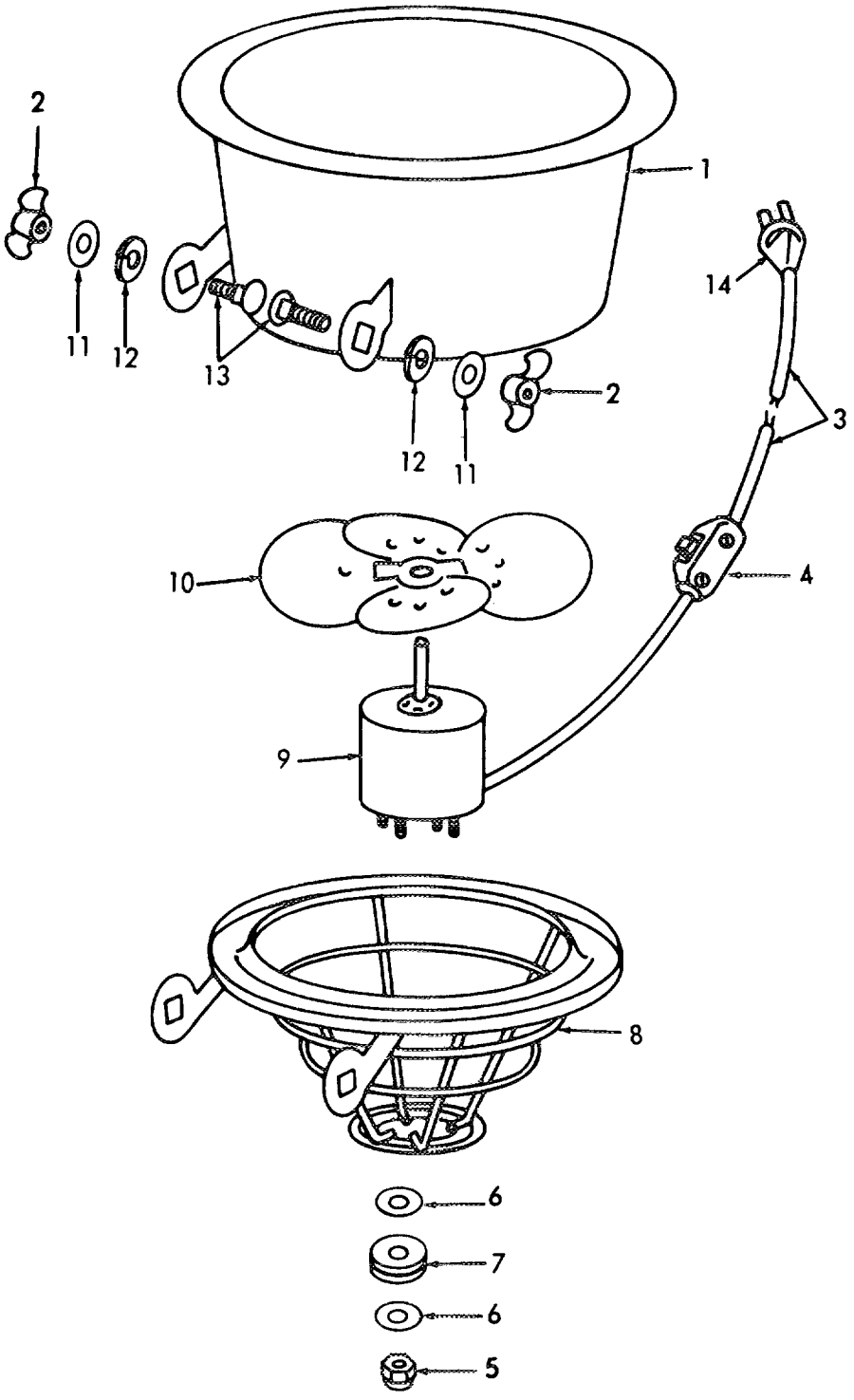


Figure C-5. Auxiliary Fan (Sheet 1 of 2)



ME 4520-235-13/C-5 (2)

Figure C-5. Auxiliary Fan (Sheet 2 of 2)

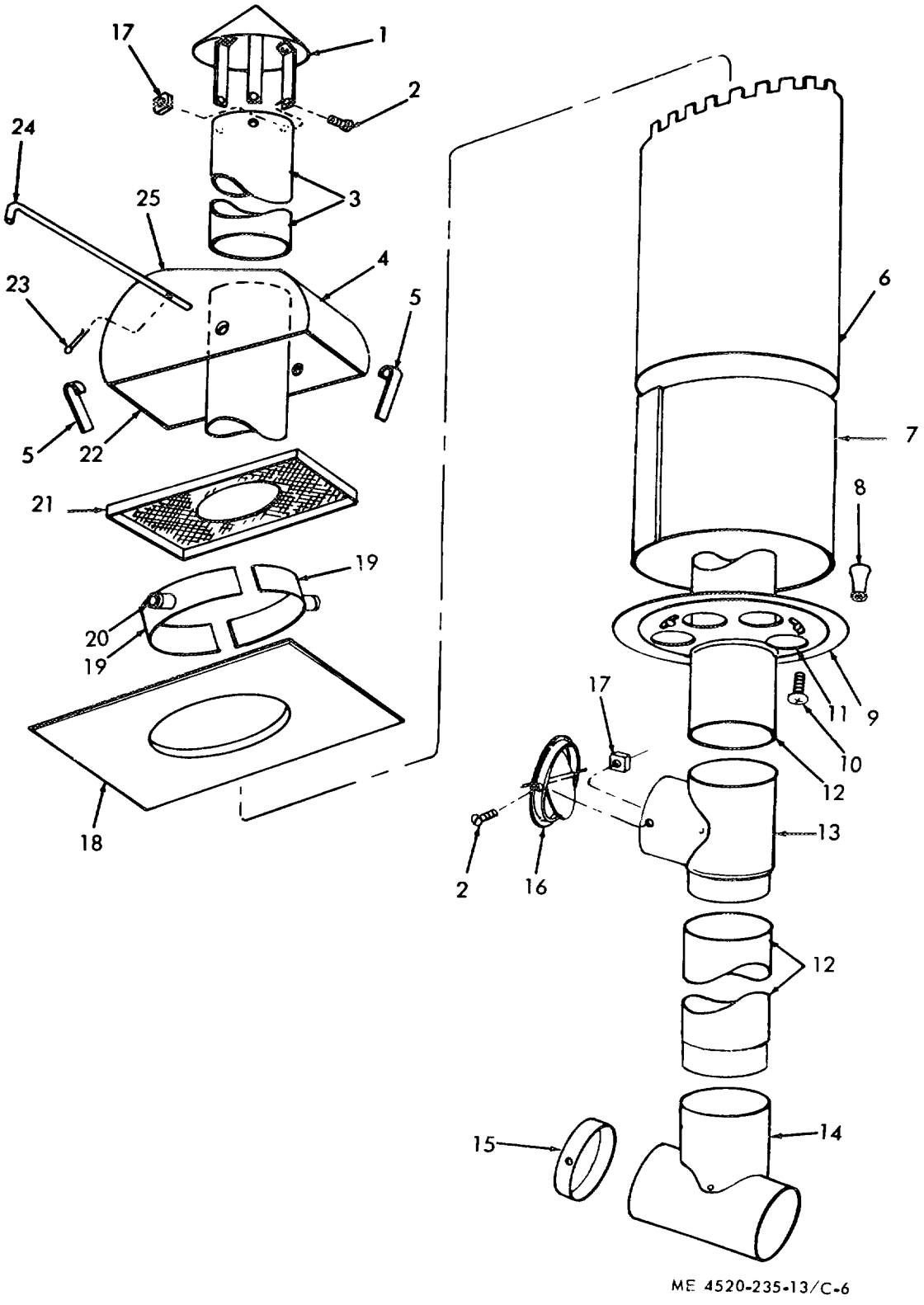


Figure C-6. Roof Jack

Section VI. INDEX-FEDERAL STOCK NUMBER AND REFERENCE NUMBER CROSS-REFERENCE TO FIGURE ANDI ITEM NUMBER

STOCK NUMBER	FIGURE No.	ITEM No.	STOCK NUMBER	FIGURE No.	ITEM No.
2930-580-9526	C5	10	5305-044-6623	C5	9
4520-273-1243	C6	12	5305-054-6664	C2	2
4520-459-6819	C5		5305-637-7678	C3	10
4520-459-7224	C1	1	5305-984-6208	C6	10
4520-459-7225	C2	5	5305-984-6211	C1	16
4520-459-7227	C3	15	5305-988-1723	C1	7
4520-874-0406	C3	12		C3	5
4520-874-0416	C3	15		C3	20
4520-874-0421	C1	25	5305-988-1725	C1	2
4520-874-0422	C4	6		C3	9
4520-874-0428	C1	10	5306-012-6358	C5	14
4520-874-0429	C2	1	5306-053-8381	C5	13
4520-874-0430	C4	7	5310-012-0379	C5	13
4520-874-0437	C1	6	5310-012-1637	C1	4
4520-874-0438	C6	1		C3	4
4520-874-0453	C1	8		C3	8
4520-874-0464	C1	14		C3	19
4520-874-3192	C1	5	5310-043-2226	C1	19
4520-874-3194	C1	23	5310-081-4219	C5	11
4520-921-6967	C5		5310-167-0765	C5	6
4520-932-7331	C1	22	5310-215-7715	C5	6
4520-982-9474	C6	15	5310-266-4461	C5	5
4520-982-9479	C6	16	5310-407-9566	C3	11
4520-983-6473	C3	16	5310-828-2189	C5	2
4520-983-6475	C5	8	5310-982-4937	C1	20
4520-983-6478	C5	4		C6	17
4520-983-6578	C5	4	5310-982-4938	C1	3
4520-989-3340	C2	4		C3	3
4520-990-0676	C6			C3	7
4520-990-2391	C6	14		C3	18
4520-990-2395	C6	13	5310-982-4974	C5	5
4520-990-2405	C5	3	5315-010-4671	C1	15
4520-999-0675	C5		5315-234-1861	C6	23
4710-278-8726	C3		5330-190-9979	C4	
4730-277-5593	C4	2	5330-458-1927	C3	17
4730-278-3039	C4	1	5340-411-3757	C1	17
4730-639-9676	C3	13	5340-929-8178	C1	18
4730-902-8990	C3		5340-983-1120	C2	5
5305-010-0766	C1	26	5670-874-0439	C6	18
5305-010-2914	C1	12	5935-823-0213	C5	14
5305-017-1420	C1	24		C5	15
	C4	5	6105-409-9229	C5	9

Section VI. INDEX-FEDERAL STOCK NUMBER AND REFERENCE NUMBER CROSS-REFERENCE TO FIGURE AND ITEM NUMBER

REFERENCE NUMBER	MFG CODE	FIG. NO.	ITEM NO.
D14034	48745	C2	5
FT2724	76871	C2	22
K12750	48745	C4	2
	48745	C4	3
K12752	48745	C4	1
K12870	91494	C3	16
	91494	C5	14
	91494	C5	15
K12871	48745	C3	17
K14209	45745	C5	3
K8072	39766	C5	7
K9328	48745	C5	4
MILCWEWQTYPEC002MFG	81349	C5	
MILP551	81349	C6	12
MILP551STYLE1	80349	C6	14
MS16208-26	96906	C3	10
MS21045-08	96906	C5	5
MS24637-33	96906	C1	24
	96906	C4	5
M624637-58	96906	C1	26
MS24665-298	96906	C6	23
MS27040-10	96906	C1	3
	96906	C3	3
	96906	C3	7
	96906	C3	18
MS27040-8	96906	C1	20
	96906	C6	17
MS27183-12	96906	C5	11
MS35206-261	96906	C6	10
MS35206-264	96906	C1	16
MS35206-265	96906	C6	2
M535206-279	96906	C1	7
	96906	C3	5
	96906	C3	20
MS35206-281	96906	C1	2
	96906	C3	9
MS35337-25	96906	C1	4
	96906	C3	4
	96906	C3	8
	96906	C3	19
MS35337-26	96906	C5	12
MS35338-24	96906	C1	19
MS35338-45	96906	C3	11
MS35425-41	96906	C5	2
MS35490-28	96906	C5	7
MS35751-40	96906	C6	13
MS39158-5	96906	C3	14
MS51957-39	96906	C2	2
MS63040-3	96906	C5	6
MS90710-17	96906	C1	15
M650	21122	C5	
N1036-4	60380	C5	10
P1034-4	60380	C5	10
TL306	50133	C5	8
TYPESJ300V	88690	C5	3
T14716	48745	C1	1
T14777	48745	C1	18
T14778	48745	C1	17
T14784	48745	C1	6
T14790	48745	C3	12
T14865	48745	C1	25
T14792	48745	C6	18
T15440	48745	C6	7
T15447	48745	C6	6
T16388	48745	C2	3
T6177	48745	C6	5
T6183	48745	C6	4
	48745	C6	25
T6185-2	48745	C6	11
T6186	48745	C6	3
T9456-2	48745	C1	6
T9566	48745	C1	21
VK1276748745		C4	8
VK6746	02279	C5	6
WVK14222	48745	C4	4
WZ3371	48745	C3	1
WZ3372	48745	C3	2
Y10855	48745	C1	23
Y10886-1	48745	C4	7
Y10894	48745	C3	21
Y10900	48745	C6	16
Y10902	48745	C6	1
Y10904	48745	C6	9
Y11339	48745	C1	9
Y11345	48745	C6	13
Y11360	48745	C6	
Y12169	48745	C2	6
Y12172	48745	C2	1
Y12311	48745	C5	8
Y12312	48745	C5	1
Y12370	48745	C1	10
Y12378	48745	C5	
Y4335-3	48745	C1	5
Y4363	48745	C3	6
Y4281	48745	C1	11
Y6524-1	48745	C1	8
Y6989-2	48745	C5	1
Y8065-2	48745	C5	11
Z2613	48745	C5	13
Z2622	48745	C5	2
Z3197	48745	C6	8
Z3248	48745	C1	13
Z3249	48745	C6	24
Z3349	48745	C2	4
Z3369	48745	C1	14
118755	24617	C1	13
1263 58	24617	C5	13
13208E6211-2	97403	C3	15
13208E6216	97403	C6	15
13208E6220	97403	C6	19
13208E6221	97403	C6	20
13208E6228	37403	C6	21
13211E9830	97403	C6	22
191919	24617	C1	12
340YR80552	91494	C3	15
445-2	48745	C5	
446623	24617	C5	9
62265	91494	C3	16A
7163-1879	81958	C5	9
914	75543	C5	12

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