

TECHNICAL MANUAL

ORGANIZATIONAL, DIRECT SUPPORT AND
GENERAL SUPPORT MAINTENANCE
REPAIR PARTS AND SPECIAL TOOLS LIST
(INCLUDING DEPOT MAINTENANCE REPAIR PARTS
AND SPECIAL TOOLS)

HEATER, DUCT-TYPE, M-68, PORTABLE
GASOLINE, 250,000 BTU
(VBM CORPORATION MODEL VBM-250
AND MODEL VBM-250A)
NSN 4520-00-001-7726

Approved for public release; distribution is unlimited.

*This manual supersedes TM 5-4520-224-24P, 15 October 1973.

HEADQUARTERS, DEPARTMENT OF THE ARMY
18 MAY 1990

TECHNICAL MANUAL

NO. 5-4520-224-24P

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 18 May 1990**Organizational, Direct Support and General Support Maintenance
Repair Parts and Special Tools List
(Including Depot Maintenance Repair Parts and Special Tools)****HEATER, DUCT-TYPE, M-68, PORTABLE,
GASOLINE, 250,000 BTU
(VBM CORPORATION MODEL VBM-250, NSN 4520-00-001-7726
AND MODEL VBM-250A, NSN 4520-01-1676532)
Current as of 20 December 1989****REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS**

You can help improve this manual. If you find any mistakes, or if you know of a way to improve these procedures, please let us know. Mail your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual directly to: Commander, US Army Aviation and Troop Command, ATTN: AMSAT-I-MP, 4300 Goodfellow Blvd., St. Louis, MO 63120-1798. You may also submit your recommended changes by E-mail directly to <mpmt%avma28 @ st-louis-emh7.army.mil>. A reply will be furnished directly to you. Instructions for sending an electronic 2028 may be found at the back of this manual immediately preceding the hard copy 2028.

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SECTION I

INTRODUCTION

1. Scope.

This RPSTL lists and authorizes spares and repair parts; special tools; special test, measurement, and diagnostic equipment (TMDE); and other special support equipment required for performance of organizational, direct support, and general support maintenance of the Heater, Duct Type, M-68. It authorizes the requisitioning, issue, and disposition of spares, repair parts and special tools as indicated by the source, maintenance and recoverability (SMR) codes.

2. General.

In addition to Section I, Introduction, this Repair Parts and Special Tools List is divided into the following sections:

a. Section II. Repair Parts List. A list of spares and repair parts authorized by this RPSTL for use in the performance of maintenance. The list also includes parts which must be removed for replacement of the authorized parts. Paris lists are composed of functional groups in ascending alphanumeric sequence, with the parts in each group listed in ascending figure and item number sequence. Bulk materials are listed in name sequence. Repair parts kits are listed separately in their own functional group within Section II. Repair parts for repairable special tools are also listed in this section. Items listed are shown on the associated illustration(s)/figure(s).

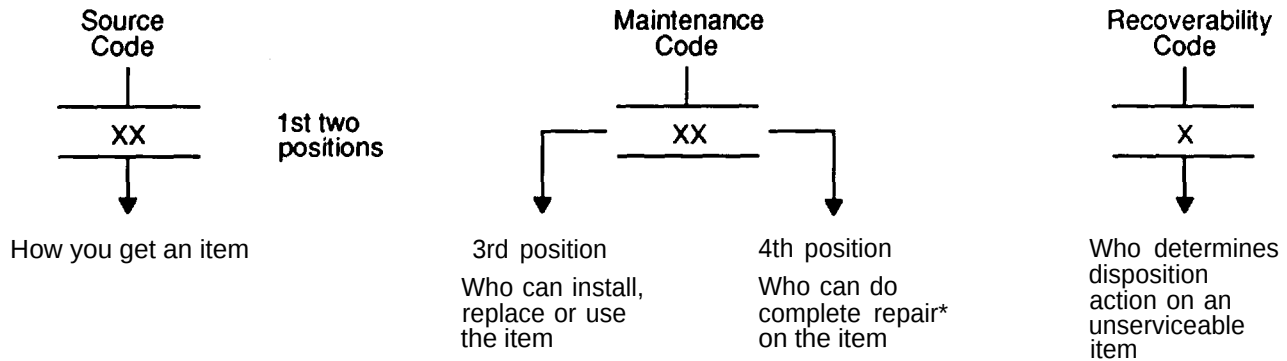
b. Section III. Special Tools List. A list of special tools, special TMDE, and other special support equipment authorized by this RPSTL (as indicated by Basis of Issue (BOI) information in DESCRIPTION AND USABLE ON CODE (column) for the performance of maintenance.

c. Section IV. National Stock Number and Part Number Index. A list, in National item identification number (NIIN) sequence, of all National stock numbered items appearing in the listing, followed by a list in alphanumeric sequence of all part numbers appearing in the listings. National stock numbers and part numbers are cross-referenced to each illustration figure and item number appearance.

3. Explanation of Columns (Sections II and III).

a. Item No. Column (1). Indicates the number used to identify items called out in the illustration.

b. SMR Code (Column (2)). The Source, Maintenance, and Recoverability (SMR) code is a 5-position code containing supply/requisitioning information, maintenance category authorization criteria, and disposition instructions, as shown in the following breakout:



*Complete Repair: Maintenance capacity, capability, and authority to perform all the corrective maintenance tasks of the "Repair" function in a use/user environment in order to restore serviceability to a failed item.

(1) Source code. The source code tells you how to get an item needed for maintenance, repair, or overhaul of an end item/equipment. Explanations of source codes follows:

Code	Explanation
PA PB PC**	Stocked items; use the applicable NSN to request/requisition items with these source codes. They are authorized to the category indicated by the code entered in the 3rd position of the SMR code.
PD PE PF PG	
KD KF KB	Items with these codes are not to be requested/requisitioned individually. They are part of a kit which is authorized to the maintenance category indicated in the 3rd position of the SMR code. The complete kit must be requisitioned and applied.

* **NOTE: Items coded PC are subject to deterioration.

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Code	Explanation
MO - (Made at unit/ AVUM Level)	Items with these codes are not to be requested/requisitioned individually. They must be made from bulk material which is identified by the part number in the DESCRIPTION and USABLE ON CODE (UOC) column and listed in the Bulk Material group of the repair parts list in the RPSTL. If the item is authorized to you by the 3rd position code of the SMR code, the source code indicates it is made at a higher level, order the item from the higher level of maintenance.
MF - (Made at DS/ AVUM Level)	
MH - (Made at GS Level)	
ML - (Made at Spe- cialized Repair Activity)	
MD - (Made at Depot)	

Code	Explanation
AO - (Assembled by unit/AVUM Level)	Items with these codes are not to be requested/requisitioned individually. The parts that make up the assembled item must be requisitioned or fabricated and assembled at the level of maintenance indicated by the source code. If the 3rd position code of the SMR code authorizes you to replace the item, but the source code indicates the item assembled at a higher level, order the item from the higher level of maintenance.
AF - (Assembled by DS/AVIM Level)	
AH - (Assembled by GS Category)	
AL - (Assembled by SRA)	
AD - (Assembled by Depot)	

Code	Explanation
XA ———	Do not requisition an "XA" – coded item. Order its next higher assembly. (Also refer to the NOTE below.)
XB ———	If an "XB" item is not available from salvage, order it using the FSCM and part number given.
XC ———	Installation drawing, diagram, instruction sheet, field service drawing, that is identified by manufacturer's part number.
XD ———	Item is not stocked. Order an "XD"- coded item through normal supply channels using the FSCM and part number given, if no NSN is available.

NOTE

Cannibalization or controlled exchange, when authorized, may be used as a source of supply for items with the above source codes, except for those source coded "XA" or those aircraft support items restricted by requirements of AR 700-72.

(2) Maintenance code. Maintenance codes tell you the level(s) of maintenance authorized to USE and REPAIR support items. The maintenance codes are entered in the third and fourth positions of the SMR Code as follows:

- (a) The maintenance code entered in the third position tells you the lowest maintenance level authorized to remove, replace, and use an item. The maintenance code entered in the third position will indicate authorization to one of the following levels of maintenance.

Code		Application/Explanation
C	—	Crew or operator maintenance done within unit or aviation unit maintenance.
O	—	Unit or aviation unit category can remove, replace, and use the item.
F	-	Direct support or aviation intermediate level can remove, replace, and use the item.
H	-	General support level can remove, replace, and use the item.
L	-	Specialized repair activity can remove, replace, and use the item.
D	-	Depot level can remove, replace, and use the item.

- (b) The maintenance code entered in the fourth position tells whether or not the item is to be repaired and identifies the lowest maintenance level with the capability to do complete repair (i.e., perform all authorized functions.) (NOTE: Some limited repair may be done on the item at a lower level of maintenance, if authorized by the Maintenance Allocation Chart (MAC) and SMR code.) This position will contain one of the following maintenance codes.

Code		Application/Explanation
O	—	Unit or aviation unit is the lowest level that can do complete repair of the item.
F	-	Direct support or aviation intermediate is the lowest level that can do complete repair of the item.
H	-	General support is the lowest level that can do complete repair of the item.
L	-	Specialized repair activity (designate the specialized repair activity) is the lowest level that can do complete repair of the item.
D	—	Depot is the lowest level that can do complete repair of the item.
Z	—	Nonreparable. No repair is authorized.
B	-	No repair is authorized. (No parts or special tools are authorized for the maintenance of a "B" coded item.) However, the item may be reconditioned by adjusting, lubricating, etc., at the user level.

(3) *Recoverability code*. Recoverability codes are assigned to items to indicate the disposition action on unserviceable items. The recoverability code is entered in the fifth position of the SMR Code as follows:

Recoverability Codes	Application/Explanation
Z	-- Nonreparable item. When unserviceable, condemn and dispose of the item at the level of maintenance shown in 3d position of SMR Code.
O	--Reparable item. When uneconomically reparable, condemn and dispose of the item at organizational or aviation unit level.
F	--Reparable item. When uneconomically reparable, condemn and dispose of the item at the direct support or aviation intermediate level.
H	--Reparable item. When uneconomically reparable, condemn and dispose of the item at the general support level.
D	--Reparable item. When beyond lower level repair capability, return to depot. Condemnation and disposal of item not authorized below depot level.
L	--Reparable item. Condemnation and disposal not authorized below specialized repair activity (SRA).
A	--Item requires special handling or condemnation procedures because of specific reasons (e.g., precious metal content, high dollar value, critical material, or hazardous material). Refer to appropriate manuals/directives for specific instructions.

c. FSCM(Column (3)). The Federal Supply Code for Manufacturer (FSCM) is a 5-digit numeric code which is used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

d. Part Number (Column (4)). Indicates the primary number used by the manufacturer (individual, company, firm, corporation, or Government activity) ,which controls the design and characteristics of the item by means of its engineering drawings, specifications, standards, and inspection requirements to identify an item or range of items.

NOTE

When you use a NSN to requisition an item, the item you receive may have a different part number from the part ordered.

e. Description and Usable on (UOC) (Column (5)). This column includes the following information:

- (1) The Federal item name and, when required, a minimum description to identify the item.
- (2) The physical security classification of the item is indicated by the parenthetical entry. (Insert applicable physical security classification abbreviation, e.g., Phy Sec C1 (C) - Confidential, Phy Sec C1 (S) - Secret, Phy Sec C1 (T)-Top Secret).

- (3) Items that are included in kits and sets are listed below the name of the kit or set.
- (4) Spare/repair parts that make up an assembled item are listed immediately following the assembled item line entry.
- (5) Part numbers for bulk materials are referenced in this column in the line item entry for the item to be manufactured/fabricated.
- (6) When the item is not used with all serial numbers of the same model, the effective serial numbers are shown on the last line(s) of the description (before UOC).
- (7) The usable on code, when applicable (see paragraph 5, Special Information).
- (8) In the Special Tools List section, the basis of issue (BOI) appears as the last line(s) in the entry for each special tool, special TM DE, and other special support equipment. When density of equipments supported exceeds density spread indicated in the basis of issue, the total authorization is increased proportionately.
- (9) The statement "End of Figure" appears just below the last item description in Column 5 for a given figure in Section II.
- (10) The indenture, shown as dots appearing before the repair part, indicates that the item is a repair part of the next higher assembly.

f. Qty (Column (6)). The Qty (quantity per figure column) indicates the quantity of the item used in the breakout shown on the illustration figure, which is prepared for a functional group, subfunctional group, or an assembly. A "V" appearing in the column in lieu of a quantity indicates that the quantity is variable and may vary from application to application.

4. Explanation of Columns (Sect. IV).

a. National Stock Number (NSN) Index.

(1) STOCK NUMBER column (5). This column lists the NSN by National item identification number (NIIN) sequence. The NIIN consists of the last nine digits of the NSN (i.e.

NSN
5305-01-064-1467).
NIIN

When using this column to locate an item, ignore the first 4 digits of the NSN. However, the complete NSN should be used when ordering items by stock number.

(2) *FIG. column*. This column lists the number of the figure where the item is identified/located. The figures are in numerical order in Section II and Section III.

(3) *ITEM column*. The item number identifies the item associated with the figure listed in the adjacent FIG. column. This item is also identified by the NSN listed on the same line.

b. Part Number Index. Part numbers in this index are listed by part number in ascending alphanumeric sequence (i.e., vertical arrangement of letter and number combination which places the first letter or digit of each group in order A through Z, followed by the numbers 0 through 9 and each following letter or digit in like order.

(1) *FSCM column.* The Federal Supply Code for Manufacturer (FSCM) is a 5-digit numeric code used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

(2) *PART NUMBER column.* Indicates the primary number used by the manufacturer (individual, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications standards, and inspection requirements to identify an item or range of items.

(3) *STOCK NUMBER column.* This column lists the NSN for the associated part number and manufacturer identified in the PART NUMBER and FSCM columns to the left.

(4) *FIG. column.* This column lists the number of the figure where the item is identified/located in Section II and III.

(5) *ITEM column.* The item number is that number assigned to the item as it appears in the figure referenced in the adjacent figure number column.

5. Special Information.

a. Usable On Codes. Usable on codes are shown in the description column. Uncoded items are applicable to all models.

Code	Used On
BUS	Model VBM-250
CXT	Model VBM-250A

b. Assembly Instructions. Detailed assembly instructions for items source coded to be assembled from component spare/repair parts are found in TM 5-4520-224-14. Items that make up the assembly are listed immediately following the assembly item entry or reference is made to an applicable figure.

c. Index Numbers. Items which have the work BULK in the figure column will have an index number shown in the item number column. This index number is a cross-reference between the National Stock Number/Part Number Index and the bulk material list in Section II.

d. Associated Publications. The publication(s) listed below pertain to the heater and its components:

Publication	Short Title
TM 5-4520-224-14	Heater, Duct-Type, M-68. Portable, Gasoline, 250,000 BTU.
TM 5-2805-256-14	Engine, Gasoline, 1 1/2 hp, Military Standard Models
TM 5-2805-256-24P	Engine Model IA08-3.