

TECHNICAL MANUAL

**ORGANIZATIONAL AND DIRECT SUPPORT  
MAINTENANCE  
REPAIR PARTS AND SPECIAL TOOLS LIST**

**HEATER, SPACE, MULTIFUEL, WITH  
BLOWER, 28 VDC  
MODEL VBM 15-1 V  
NSN 4520-01-032-7376**

Approved for public release; distribution is unlimited.

\*This manual supersedes TM 5-4520-242-23P, 18 March 1982, including all changes.

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HEADQUARTERS, DEPARTMENT OF THE ARMY  
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**Organizational and Direct Support Maintenance  
Repair Parts and Special Tools List  
for  
HEATER, SPACE, MULTIFUEL, WITH BLOWER, 28 VDC  
MODEL VBM 15-IV  
NSN 4520-01-032-7363**

Current as of 4 August 1989

**REPORTING OF ERRORS AND RECOMMENDING IMPROVEMENTS**

You can help improve this manual, If you find any mistake or if you know of a way to improve the procedures, please let us know, Mail your letter, DA Form 2028 ( Recommended Changes to Publications and Blank Forms) or DA Form 2028-2 located in the back of this manual direct to: Commander, U.S. Army Troop Support Command, ATTN: AMSTR-MCTS, 4300 Goodfellow Blvd., St. Louis, MO 63120-1798. A reply will be furnished directly to you.

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ORGANIZATIONAL AND DIRECT SUPPORT MAINTENANCE  
REPAIR PARTS AND SPECIAL TOOLS LIST

HEATER, SPACE, MULTIFUEL, WITH BLOWER, 28 VDC  
MODEL VBM 15-IV  
NSN 4520-01-032-7376

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 and direct support of the Heater, Space. 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 this section, 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. Parts 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 item 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).

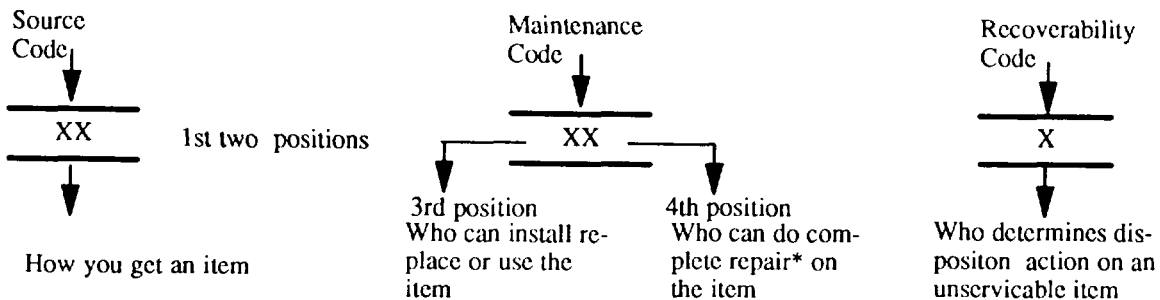
b. **Section III. Special Tools List.** A list of special tools, special TMDE, and other special support equipment authorized by this RPSTL (as indicated by Basis of Issue (BOI) information in DESCRIPTION AND USABLE ON CODE column) for the performance of maintenance.

c. **Section IV. Cross-references indexes.** 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. The figure and item number index lists figure and item number in alphanumeric sequence and cross references NSN, FSCM and part number.

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 instruction, as shown in the following breakout:



**NOTE**

● Complete Repair: Maintenance capacity, capability, and authority to perform all 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** PD PE PF PG	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 3d position of the SMR code.
KD KF KB	● *NOTE: Items coded PC are subject to deterioration.  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 3d position of the SMR code, The complete kit must be requisitioned and applied.
MO—(Made at org. AVUM Level MF—(Made at DS/ AVUM Level MH—(Made at GS Level) ML—Made at Specialized Repair Activity (SRA) MD—(Made at Depot)	Explanation  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 park list in this RPSTL. If the item is authorized to you by the 3d position code of the SMR code, but the source code indicates it is made at a higher level, order the item from the higher level of maintenance.

	Explanation
AO -- (Assembled by org/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 3d position code of the SMR code authorizes you to replace the item, but the source code indicates the items are 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)	
AD -- (Assembled by Depot)	

Code	Explanation
XA --	Do not requisition "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 pad 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, maybe 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 750-1.

- (2) **Maintenance Code.** Maintenance codes tells 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 organizational or aviation unit maintenance.
O	—Organizational 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 repair 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 codes. This position will contain one of the following maintenance codes.

Code	Application/Explanation
O	Organizational 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 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.

Recoverability

Codes	Application/Explanation
0	—Reparable item. When uneconomically repairable, condemn and dispose of the item at organizational or aviation unit level
F	—Reparable item. When uneconomically repairable, condemn and dispose of the item at the direct support or aviation intermediate level
H	—Reparable item. When uneconomically repairable, 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 an NSN to requisition an item, the item you receive may have a different part number from the part ordered.

e. **DESCRIPTION AND USABLE ON CODE (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, e.g., Phy Sec CI - Confidential, Phy Sec CI (S) - Secret, Phy Sec CI (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 TMDE, 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 both Section II and Section III.
- (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 this column in lieu of a quantity indicates that the quantity is variable and may vary from application to application.

4. EXPLANATION OF COLUMNS (SECTION IV).

a. NATIONAL STOCK NUMBER (NSN) INDEX.

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

$$\text{NSN} \quad \text{NSN}$$
NSN, i.e.  $(5305-01-574-1467)$ .  
 $\text{NIIN}$

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

**c. FIGURE AND ITEM NUMBER INDEX.**

- (1) **FIG. column.** This column lists the number of the figure where the item is identified/located in Section II and III.
- (2) **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.
- (3) **STOCK NUMBER column.** This column lists the NSN for the item.
- (4) **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.
- (5) **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.

**5. SPECIAL INFORMATION.**

**a. USABLE ON CODE.** The usable on code appears in the lower left corner of the Description column heading. Usable on codes are shown as "UOC: . . . . ." in the Description Column (justified left) on the last line applicable item description/nomenclature. Uncoded items are applicable to all models.

**b. ASSOCIATED PUBLICATIONS.** The publications listed below pertains to the Heater, Space Multifuel and its components.

Publication	Short Title
TM 5-4520-242-13	Heater, Space, Multifuel, with Blower, 28VDC

**6. HOW TO LOCATE REPAIR PARTS.**

**a. When National Stock Number or Part Number is NOT known.**

- (1) **First.** Using the table of contents, determine the assembly group or subassembly group to which the item belongs. This is necessary since figures are prepared for assembly groups and subassembly groups, and listings are divided into the same groups.
- (2) **Second. Find** the figure covering the assembly group or subassembly group to which the item belongs.
- (3) **Third.** Identify the item on the figure and note the item number.
- (4) **Fourth.** Refer to the Repair Parts List for the figure to find the part number for the item number noted on the figure.

(5) Fifth. Refer to the Part Number Index to find the NSN, if assigned.

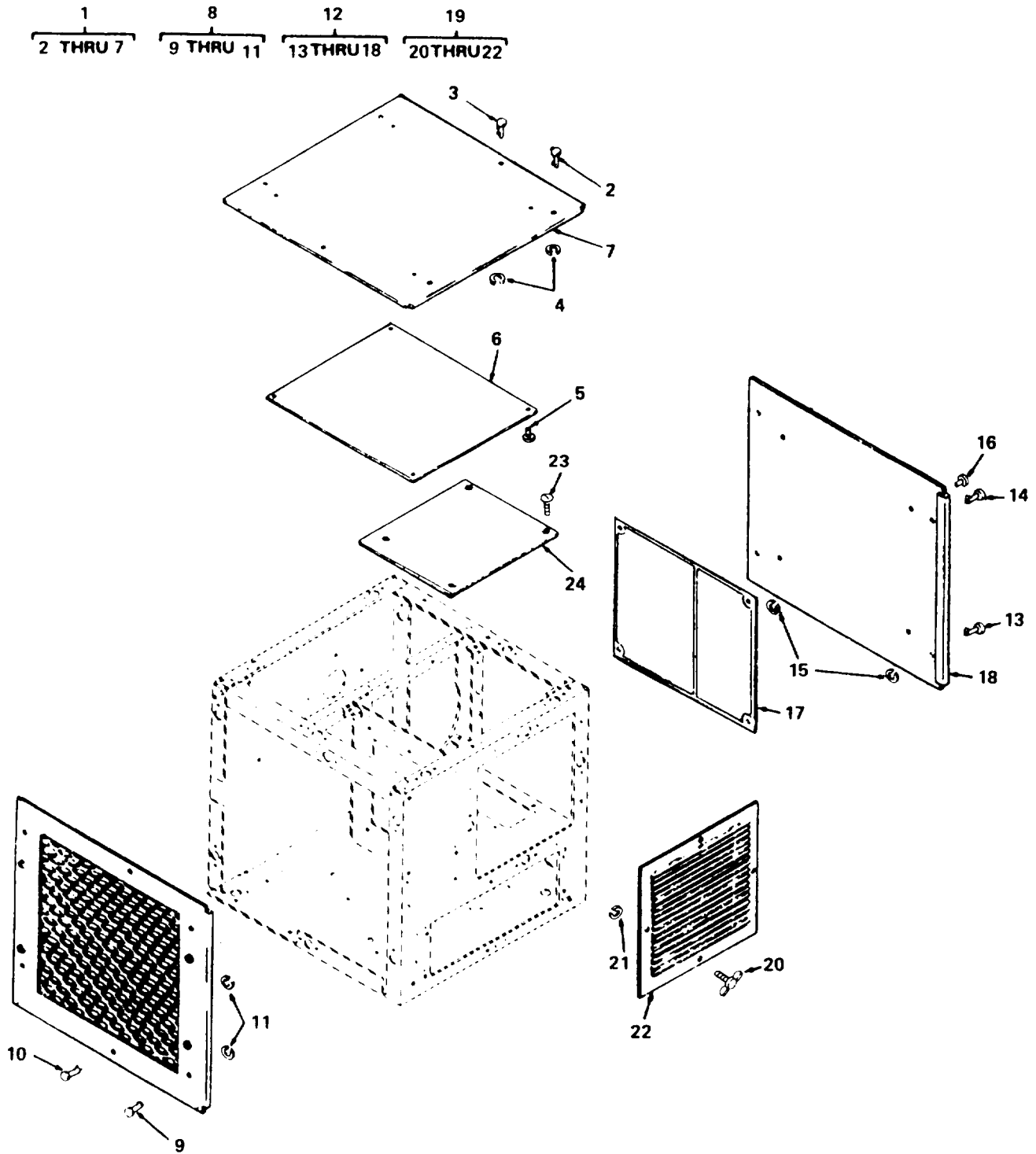
**b. When National Stock Number or Part Number Is Known:**

(1) **First. Using the Index** of National Stock Numbers and Part Numbers, find the pertinent National Stock Number or Part Number. The NSN index is in National Item Identification Number (NIIN) sequence (see 4a.(1)). The part numbers in the Part Number index are listed in ascending alphanumeric sequence (see 4.b). Both indexes cross-reference you to the illustration figure and item number of the item you are looking for.

(2) **Second. After finding the figure and item number, verify that the item is the one you are looking for, then locate the item number in the repair parts list for the figure.**

**7. Abbreviations.** Abbreviations used in this manual are listed in MIL-STD-12.

Abbreviations	Explanation	Abbreviations	Explanation
amt	armature	evap	evaporation
assy	assembly	fdfl	fluid flow
bdgh	binding head	hd	head
bsc	basic	math	machine
cntfgl	centrifugal	mfr	manufacture
cond	condenser	mtg	mounting
cent	control	ovld	overload
cprsr	compressor	press	pressure
ctsk	countersunk	rcpt	receptacle
elec	electrical	rnd	round



4786-001

Figure 1. Housing Panels and Louver.

SECTION II (1)	SMR (2)	FSCM (3)	TM5-4520-242-23P PART NUMBER (4)	DESCRIPTION AND USABLE ON CODE (UOC) (5)	QTY (6)
				GROUP 01 NOT USED	
				GROUP 02 HOUSING PANELS AND LOUVERS	
				FIG. 1 HOUSING PANELS AND LOUVERS	
1	XBOZZ	93084	154-211	PANEL ASSEMBLY TOP	1
2	PAOZZ	94222	85-11-100-16	.STUD ASSEMBLY	4
3	XDOZZ	94222	85-11-160-16	.STUD ASSEMBLY	2
4	PAOZZ	94222	85-34-101-20	.WASHER,SPLIT	6
5	PAOZZ	96906	MS16535-153	.RIVET TUBULAR	4
6	XBFZZ	93084	154-137	.PLATE WIRING DIAG	1
7	XBOZZ	93084	154-179	.PANEL TOP	1
8	XBOZZ	93084	154-209	PANEL ASSEMBLY LS	1
9	PAOZZ	94222	85-11-100-16	.STUD ASSEMBLY	4
10	XDOZZ	94222	85-11-160-16	.STUD ASSEMBLY	2
11	PAOZZ	94222	85-34-101-20	.WASHER,SPLIT	6
12	XBOZZ	93084	154-210	PANEL ASSEMBLY RS	1
13	PAOZZ	94222	85-11-100-16	.STUD ASSEMBLY	3
14	XDOZZ	94222	85-11-160-16	.STUD ASSEMBLY	1
15	PAOZZ	94222	85-34-101-20	.WASHER,SPLIT	4
16	PAOZZ	96906	MS16535-153	.RIVET TUBULAR	4
17	XBFZZ	93084	154-193	.PLATE WIRING SCHEM	1
18	XBOZZ	93084	154-180	.PANEL RIGHT SIDE	1
19	XBOZZ	93084	154-212	LOUVER ASSEMBLY	1
20	XBOZZ	93084	154-208	.STUD WING HEAD	4
21	PAOZZ	94222	85-34-101-20	.WASHER,SPLIT	4
22	XBOZZ	93084	154-130	.LOUVER	1
23	PAOZZ	96906	MS35191-273	SCREW MACHINE	4
24	XBOZZ	93084	154-176	COVER COMB CHAMBER	1

END OF FIGURE