

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

ORGANIZATIONAL MAINTENANCE
REPAIR PARTS AND SPECIAL TOOL LISTS
FOR
INDICATOR, OUTLET VALVE LEAKAGE, M4A1
(FSN 6665-738-2128)

Headquarters, Department of the Army, Washington D.C.
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**SECTION I
INTRODUCTION**

1. Purpose and Scope

This manual provides a list of repair parts for the M4A1 Outlet Valve Leakage Indicator. It is to be used by organizational maintenance and supply personnel as a requisitioning reference document. It contains within appropriate groups, those repair parts authorized for second echelon maintenance. Appropriate allowance factors to be used in computing allowance quantities are included.

2. Explanation of Columns

a. Index Number. A number is assigned to each repair part to facilitate indexing and referencing. The numbers are identical to those assigned to the same assembly, subassembly, and repair part in TM 3-6665-209-35P.

b. S, M, R Code. Source, maintenance, and recoverability codes are assigned in accordance with AR 700-18 as follows:

- (1) *Source.* The source code consists of a

number which identifies the technical service having supply responsibility for the repair part, and a code symbol which indicates the source from which the repair part may be obtained.

(a) Technical services having supply responsibility are identified by the following numbers which constitute the first element of the source code:

- 3 - Chemical Corps
- 5 - Corps of Engineers
- 8 - Medical Service Corps
- 11 - Signal Corps

(b) Code symbols indicating the source of repair parts are the second element of the source code, and are as follows:

1. Code "P" - Repair parts which are high mortality parts; procured by technical services, stocked in and supplied from the technical service depot system, and authorized for use at indicated maintenance echelons.
2. Code "P1" - Repair parts which are low mortality parts; procured by technical services, stocked only in and supplied from technical service key depots, and authorized for installation at indicated maintenance echelons.
3. Code "X2" - Repair parts which are not stocked. The indicated maintenance echelon requiring such repair parts will attempt to obtain them through cannibalization; if not obtainable through cannibalization, such repair parts will be requisitioned with supporting justification through normal supply channels.

(2) *Maintenance Code.* The maintenance code consists of a single letter denoting the lowest echelon of maintenance authorized to install or manufacture the repair part - as follows:

O-Organizational Maintenance
(1st and 2nd echelons)

Maintenance echelons are defined in AR 750-5.

(3) *Recoverability Code.* The recoverability code consists of a single letter which indicates that the responsible technical service desires the return of unserviceable repair parts for recovery or salvage. When no code is indicated in the recoverability column the part will be considered expendable. The following code will be used:

R - Repair parts and assemblies which are economically repairable at field maintenance activities (3rd and 4th echelon) and are normally furnished by supply on an exchange basis.

- c. *Federal Stock Number.* Federal stock numbers are assigned by the Federal Cataloging Program and are to be used in accordance with AR 708-15.
- d. *Description.* The approved Federal item name appears in upper case (capital) letters. Modifiers necessary for proper identification appear in lower case (small) letters.
- e. *Unit of Issue.* The unit of issue for each item listed is indicated in this column.
- f. *Expendability.* The symbol NX indicates that an item is nonexpendable. When no symbol appears, the item is expendable.
- g. *Quantity per Unit.* Quantities listed in this column represent the actual quantity of the repair part used in the group, section, assembly, or subassembly indicated. If a repair part has more than one application, the quantity per unit becomes the total quantity per equipment and is indicated only in the initial appearance of the part. This column remains blank in all subsequent appearances of the repair part. Unless otherwise indicated, the unit of measure applicable to the quantity per unit is the same as the unit of issue.
- h. *Allowances Authorized 2nd Echelon.*
 - (1) The quantitative allowances for second echelon maintenance represent one prescribed load for a 15-day period for the number of major items

supported. Authorized quantities must be on hand or on order at all times.

- (2) Combat essential items which must be stocked at all times, regardless of demand, are identified by inclosure of the quantitative allowance in parenthesis.
- (3) Major commanders will determine the number of prescribed loads that second echelon units and organizations will carry. Units and organizations authorized additional prescribed loads will multiply the number of equipments supported by the number of prescribed loads and then use the appropriate equipment density column to obtain the stockage level.

Example:

$$\begin{array}{rcl} \text{Number of equipments supported} & = & 30 \\ \text{Number of prescribed loads} & = & \underline{\times 3} \\ & & 90 \end{array}$$

$$\begin{array}{rcl} \text{Equipment density 51 - 100} & = & 2 \\ \text{Authorized quantity} & = & 2 \end{array}$$

- (4) An asterisk appearing in an allowance column indicates that the item may be requisitioned for immediate usage, but stockage of the item is not authorized.
- (5) The allowance quantities for a repair part with more than one application are indicated only in the initial appearance of the part.

i. Illustrations. This column contains the figure number of each illustration and the item number on that illustration for indicated repair parts.

3. Abbreviations.

The abbreviations used herein are defined as follows:

- alw.....allowances
- bg.....bag
- ea.....each
- fig.....figure
- ft.....foot/feet
- id.....inside diameter(s)
- in.....inch(es)
- lg.....long/length
- No.number
- NX.....nonexpendable
- od.....outside diameter(s)
- pkg.....package
- thk.....thick(ness)
- v.....volt
- w.....watt

4. Suggestions and Recommendations

a. Notice of discrepancies and/or suggested changes are requested and encouraged. They should be forwarded through command channels on DA Form 2028 to the Commanding General, U.S. Army Edgewood Arsenal, ATTN: SMUEA-EIS-EM-ES, Edgewood Arsenal, Maryland (21010).

b. Suggestions and recommendations for changes to repair parts allocations and allowance factors should include the following minimum data for each repair part concerned:

- (1) Stock number.
- (2) Nomenclature.
- (3) End item in which the part is incorporated.
- (4) Number of demands in 90 days.
- (5) Number of end items supported.
- (6) Recommended action and brief justification.

SECTION II. FUNCTIONAL PARTS LIST

INDEX NO.	S, M, R CODE				FEDERAL STOCK NUMBER	DESCRIPTION	UNIT OF ISSUE	EXPEND-ABILITY	QUANTITY PER UNIT	15-DAY ALW PER EQUIP DENSITY			ILLUSTRATIONS	
	MATERIAL CODE NO.	SOURCE	MAINTENANCE LEVEL	RECOVER-ABILITY						2ND ECHELON			FIG. NO.	ITEM NO.
										1-5	6-20	21-50		
1					6665-738-2128	INDICATOR, OUTLET VALVE LEAKAGE, M4A1	ea	NX				1		
						GROUP 100 - CHASSIS								
						Electrical Components Section								
2	3	P1	O	R	6665-779-5928	CHASSIS ASSEMBLY, ELECTRIC	ea		1	*	*	*	2	
5	11	P	O		5960-228-3765	ELECTRON TUBE, glass envelope, triode amplifier	ea		1	(1)	(2)	(5)	2 1	
						Mechanical Components Section								
33	3	P1	O	R	6665-778-6003	CHASSIS ASSEMBLY	ea		1	*	*	*	3, 4	
36	3	P1	O		6665-778-7117	ADAPTER, TEST VALVE	ea		1	*	*	*	3 1	
54	3	P	O		6665-778-3482	FILTER, ORIFICE, pkg 10 per bag	lg		4 ea	1	2	5	4 1	
57	5	P	O		5920-280-8348	FUSE	ea		1	(1)	(2)	(4)	3 5	
67	5	P	O		6240-143-3049	LAMP, INCANDESCENT, 120 v, 6 w, type 8-6, white light	ea		3	1	1	2	3 4	
81	3	P1	O		6665-798-3442	PLUNGER, TEST VALVE	ea		1	*	*	*		
112	3	P1	O		4720-849-3206	TUBE, RUBBER, 1/8 in. id., 1/8 in. wall thk	ft		1 in.	*	*	*	4 2	
113	5	P1	O		4720-244-7786	TUBE, RUBBER, natural rubber, black 3/16 in. id., 3/8 in. od	ft		6 in.	*	*	*	3 2	
114	3	P1	O		4720-244-7789	TUBE, RUBBER, natural rubber, black 1/4 in. id, 3/32 in. wall thk	ft		18 in.	*	*	*	3 3	

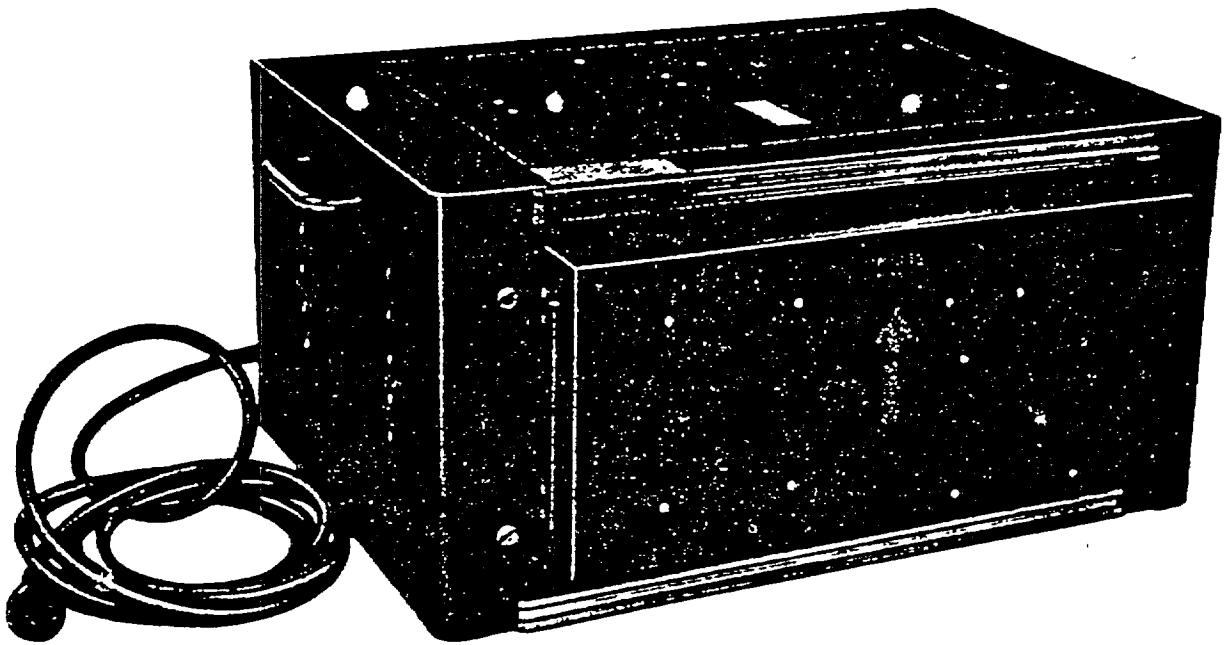


Figure 1. M4A1 outlet valve leakage Indicator, right front view.

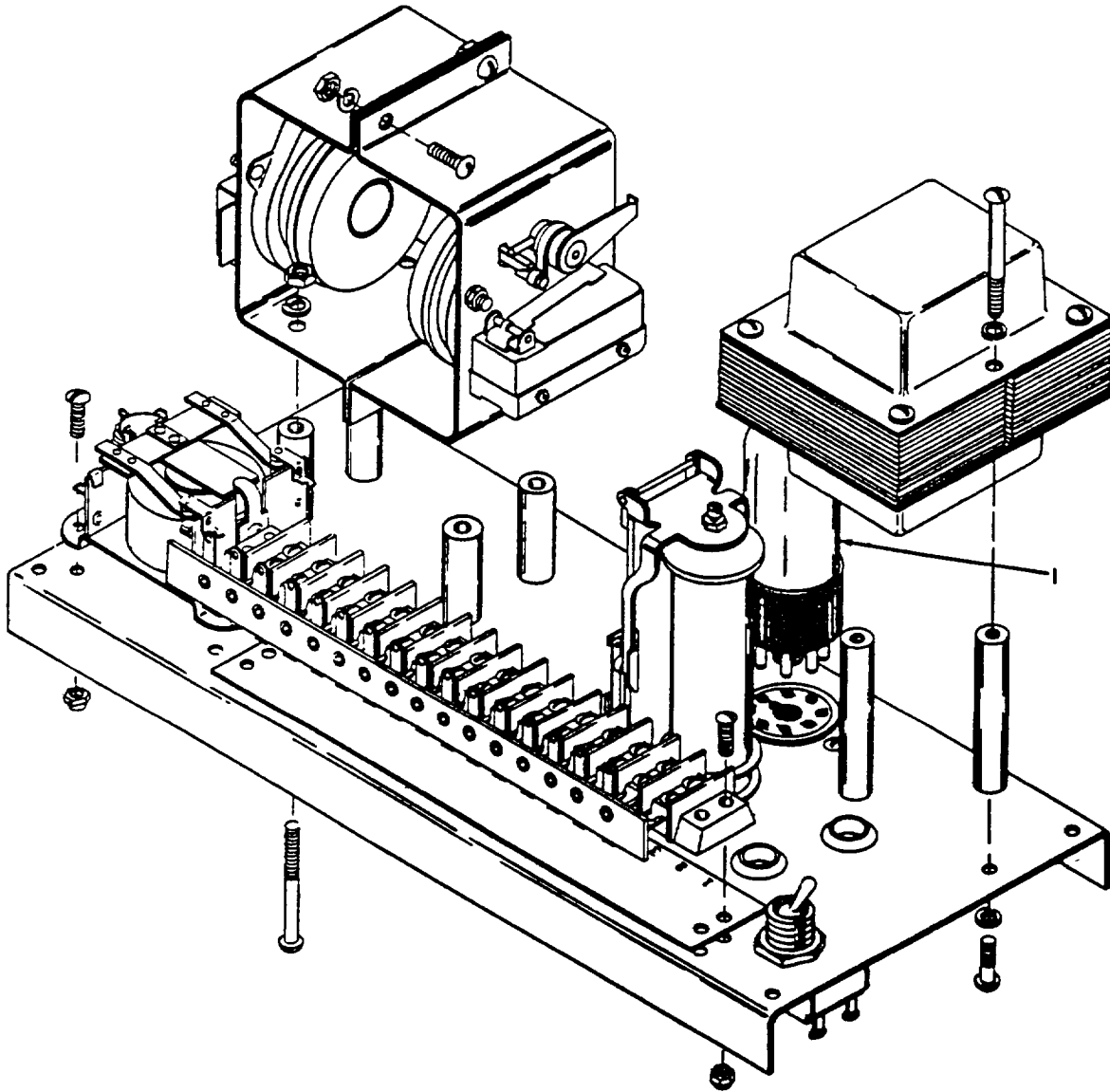


Figure 2. Electric chassis assembly, top view.

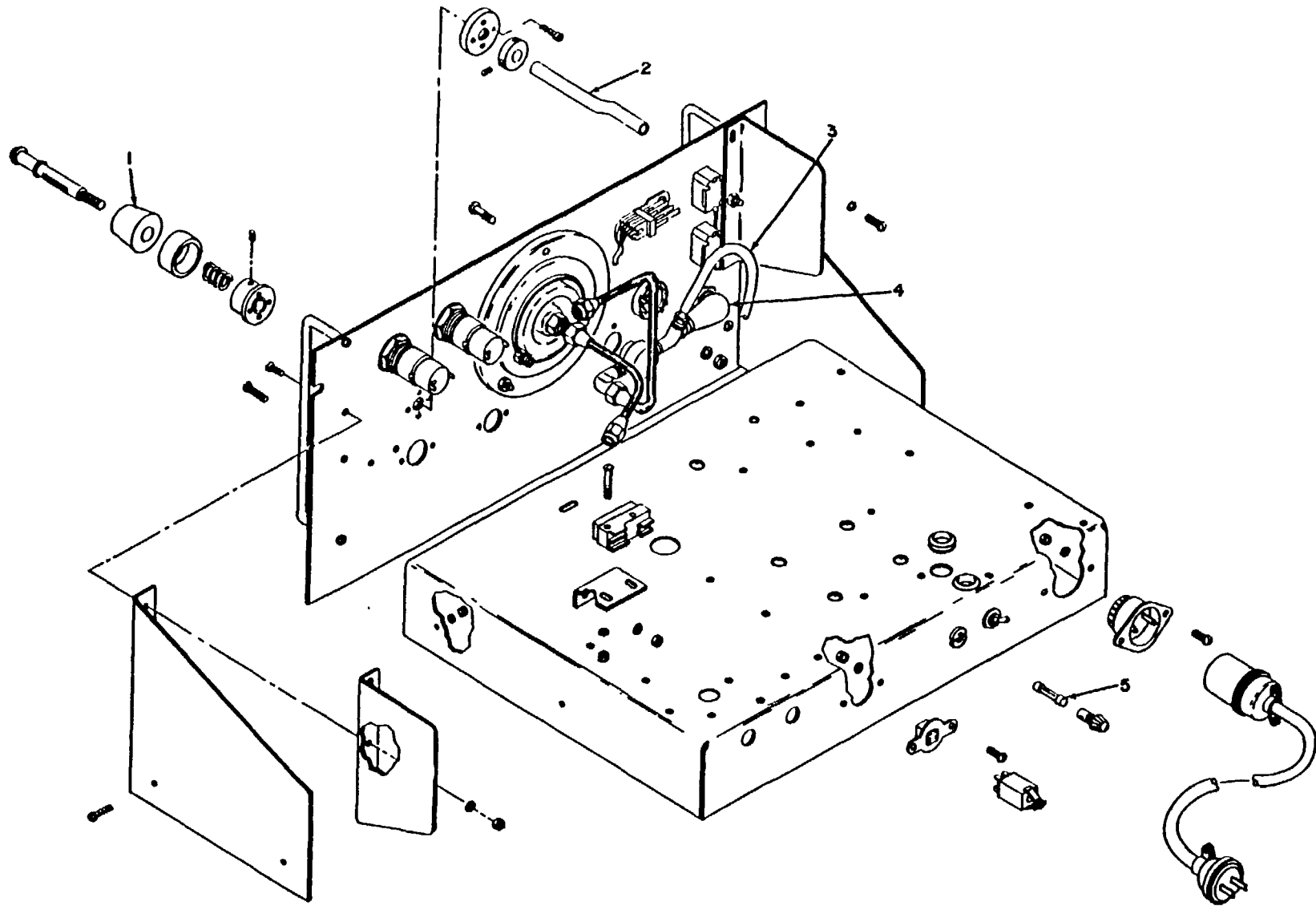


Figure 3. Chassis assembly, rear view.

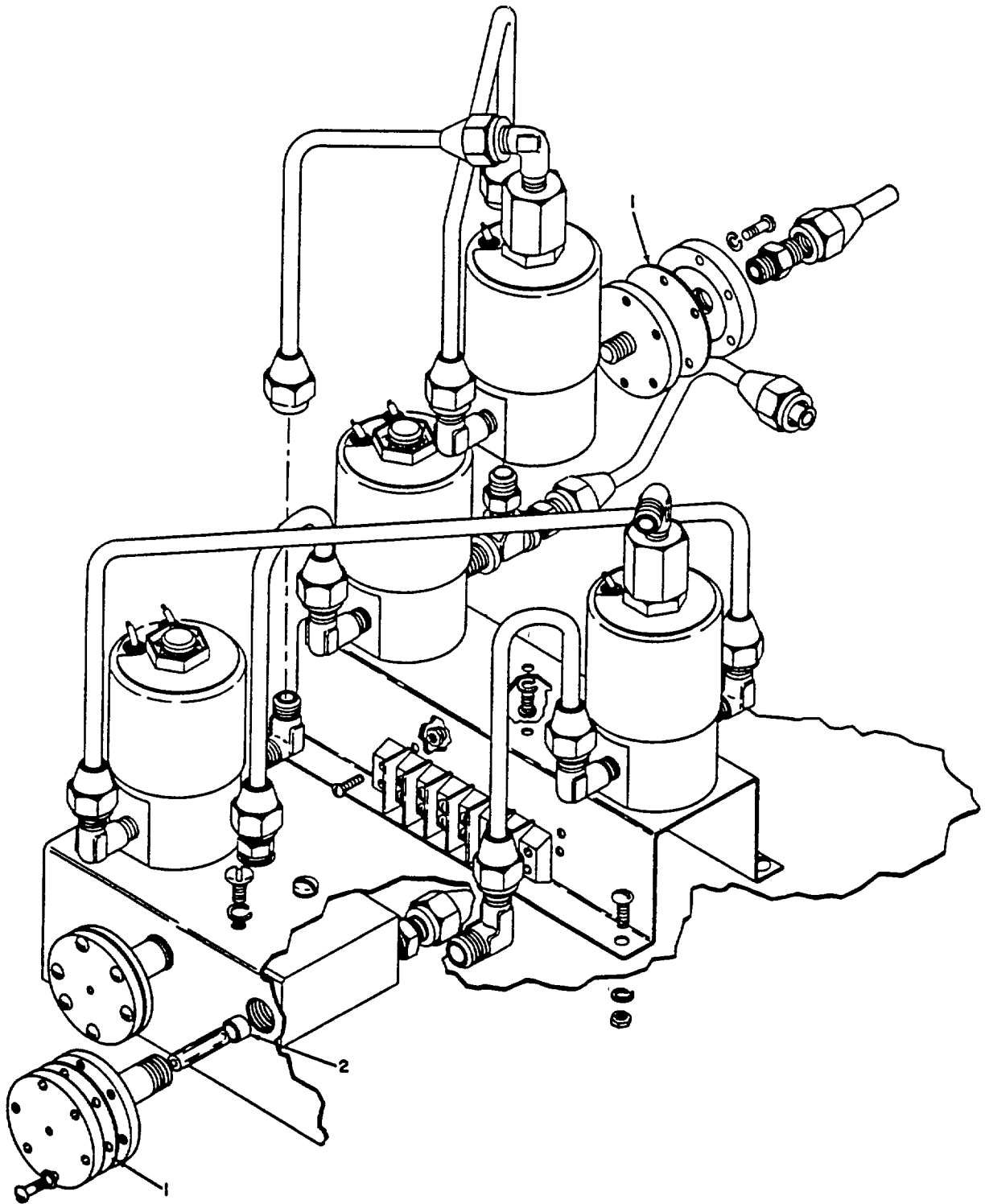


Figure 4. Chassis assembly - solenoid valves.

INDEX NO.	S, M, R CODE				FEDERAL STOCK NUMBER	DESCRIPTION	UNIT OF ISSUE	EXPEND-ABILITY	QUANTITY PER UNIT	15-DAY ALW PER EQUIP DENSITY			ILLUSTRATIONS	
	MATERIAL CODE NO.	SOURCE	MAINTENANCE LEVEL	RECOVER-ABILITY						2ND ECHELON			FIG. NO.	ITEM NO.
										1-5	6-20	21-50		
						Motor and Pump Assembly								
176	3	P	O		3665-778-3482	FILTER, ORIFICE, pkg 10 per bag (See index No. 54 for quantities and allowances)	bg						5	1
185	5	P1	O		4710-809-8149	PLASTIC TUBING, polyethylene, 0.250 in. od, 0.040 in. wall thk, 300 in. lg, white	ft	6-1/2 in.	*	*	*		5	4
194	8	P1	O		6640-441-0000	STOPPER, RUBBER, No. 4	ea	1	*	*	*		5	4
196	3	P1	O		4720-244-7789	TUBE, RUBBER, natural rubber, black, 1/4 in. id, 3/32 in. wall thk (See index No. 114 for quantities and allowances)	ft						5	2
						GROUP 300 - COVER								
225	3	P1	O	R	6665-775-8936	COVER, PANEL ASSEMBLY	ea	1	*	*	*		6	
235	3	P	O		6665-808-8830	ORIFICE, pyrex, size 1	ea	2	*	1	2		6	2
236	3	P	O		6665-808-8832	ORIFICE, pyrex, size 3	ea	2	*	1	2		6	3
243	5	P1	O		4720-809-3191	TUBE, RUBBER, natural rubber, 1/8 in. id, 1/8 in. wall thk, 30 in. lg	ea	1	*	*	*		6	1
						GROUP 400 - PROBE								
246	3	P1	O	R	6665-792-2534	PROBE ASSEMBLY	ea	1	*	*	*		7	
248	3	P1	O		6665-778-7117	ADAPTER, TEST VALVE (See index No. 36 for quantities and allowances)	ea						7	1
251	5	P1	O		4730-585-8621	CLAMP, HOSE, steel, 13/16 in. to 7/8 in. id	ea	2	*	*	*		7	3
261	3	P1	O		6665-778-9587	SCREW, MASK TIP	EA	1	*	*	*		7	2

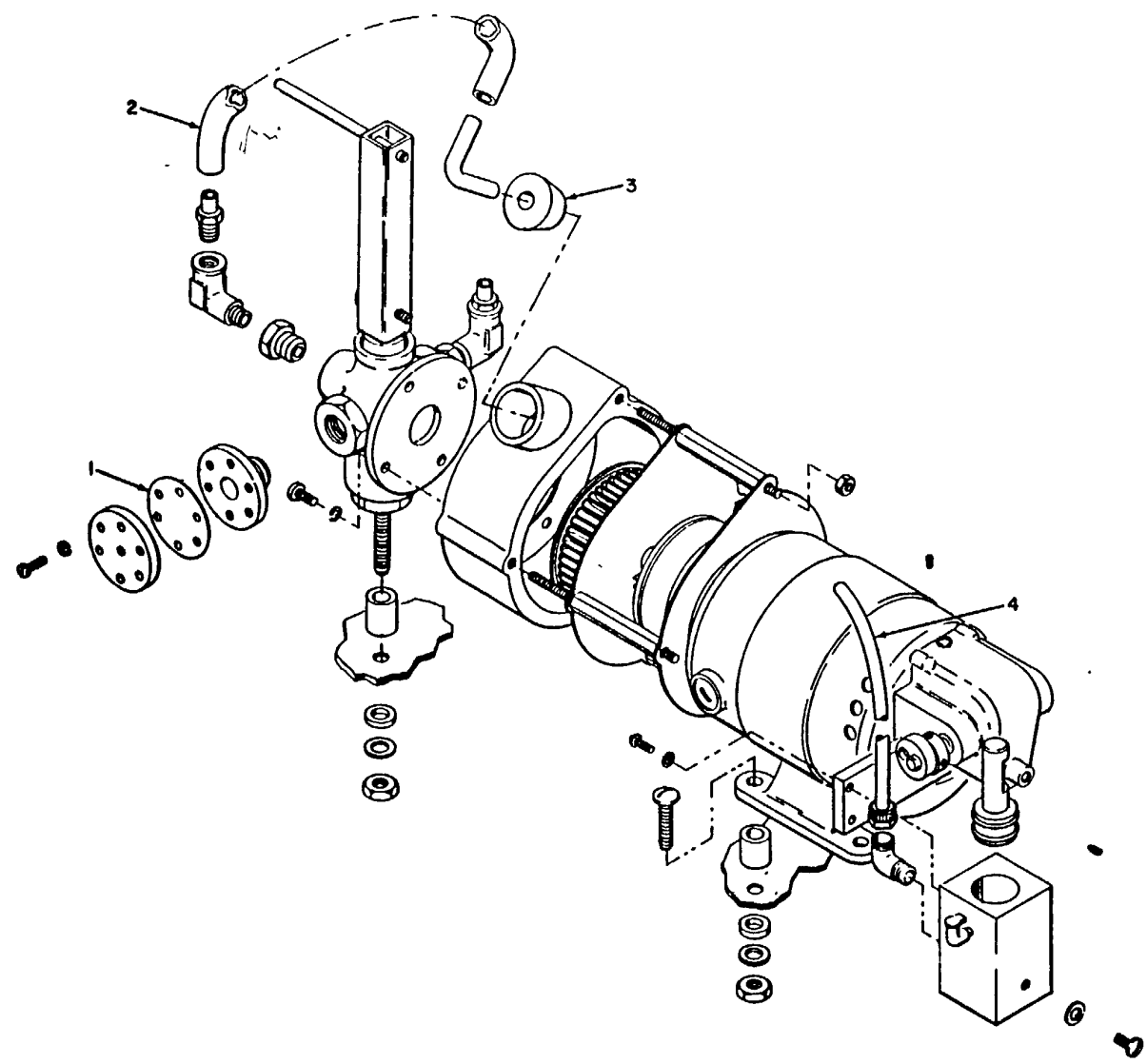


Figure 5. Motor and pump assembly

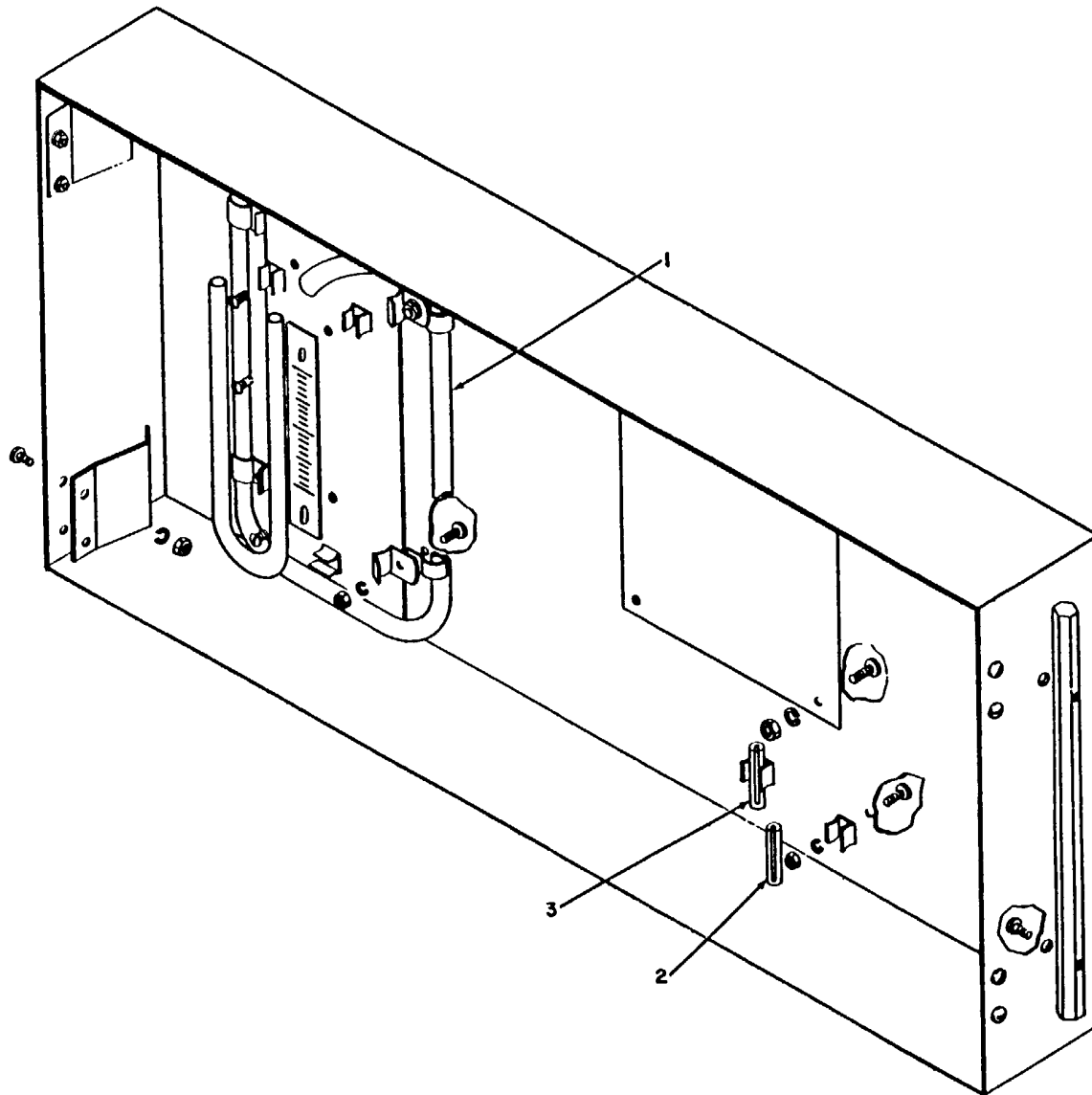


Figure 8. Panel cover assembly.

INDEX NO.	S, M, R CODE				FEDERAL STOCK NUMBER	DESCRIPTION	UNIT OF ISSUE	EXPEND-ABILITY	QUANTITY PER UNIT	15-DAY ALW PER EQUIP DENSITY			ILLUSTRATIONS	
	MATERIAL CODE NO.	SOURCE	MAINTENANCE LEVEL	RECOVER-ABILITY						2ND ECHELON			FIG. NO.	ITEM NO.
										1-5	6-20	21-50		
262	3	P1	O		6665-778-9588	SCREW, MASK TIP	ea		1	*	*	*		
265	3	P	O		6665-792-2539	TIP, MASK TESTING	ea		1	1	1	2	7	1
256	3	p	o		6665-792-2540	TIP, MASK TESTING	ea		1	1	1	3	7	1
GROUP 500 - ACCESSORY EQUIPMENT														
272	3	P	O		6665-808-8830	ORIFICE, pyrex, size 1 (See index No. 235 for quantities and allowances)	ea							
273	3	X2	O		6665-808-8831	ORIFICE, pyrex, size 2	ea		2	*	*	*		
274	3	P	O		6665-808-8832	ORIFICE, pyrex, size 3 (See index No. 236 for quantities and allowances)	ea							
275	3	P1	O		6665-808-8836	ORIFICE, pyrex, size 7	ea		2	*	*	*		
276	3	P1	O		6665-809-0466	ORIFICE, pyrex, size 14	ea		1	*	*	*		
277	3	P1	O		6665-809-0467	ORIFICE, pyrex, size 15	ea		2	*	*	*		
278	3	P1	O		6665-809-0468	ORIFICE, pyrex, size 16	ea		1	*	*	*		
279	3	P1	O		6665-474-7261	ORIFICE, pyrex, size 17	ea		2	*	*	*		
280	3	P1	O		6665-076-6992	ORIFICE, pyrex, size 18	ea		2	*	*	*		
281	3	P1	O		6665-076-6991	ORIFICE, pyrex, size 19	ea		2	*	*	*		
282	3	P1	O		6665-076-6990	ORIFICE, pyrex, size 20	ea		1	*	*	*		
283	3	P1	O		6665-076-6989	ORIFICE, pyrex, size 21	ea		1	*	*	*		

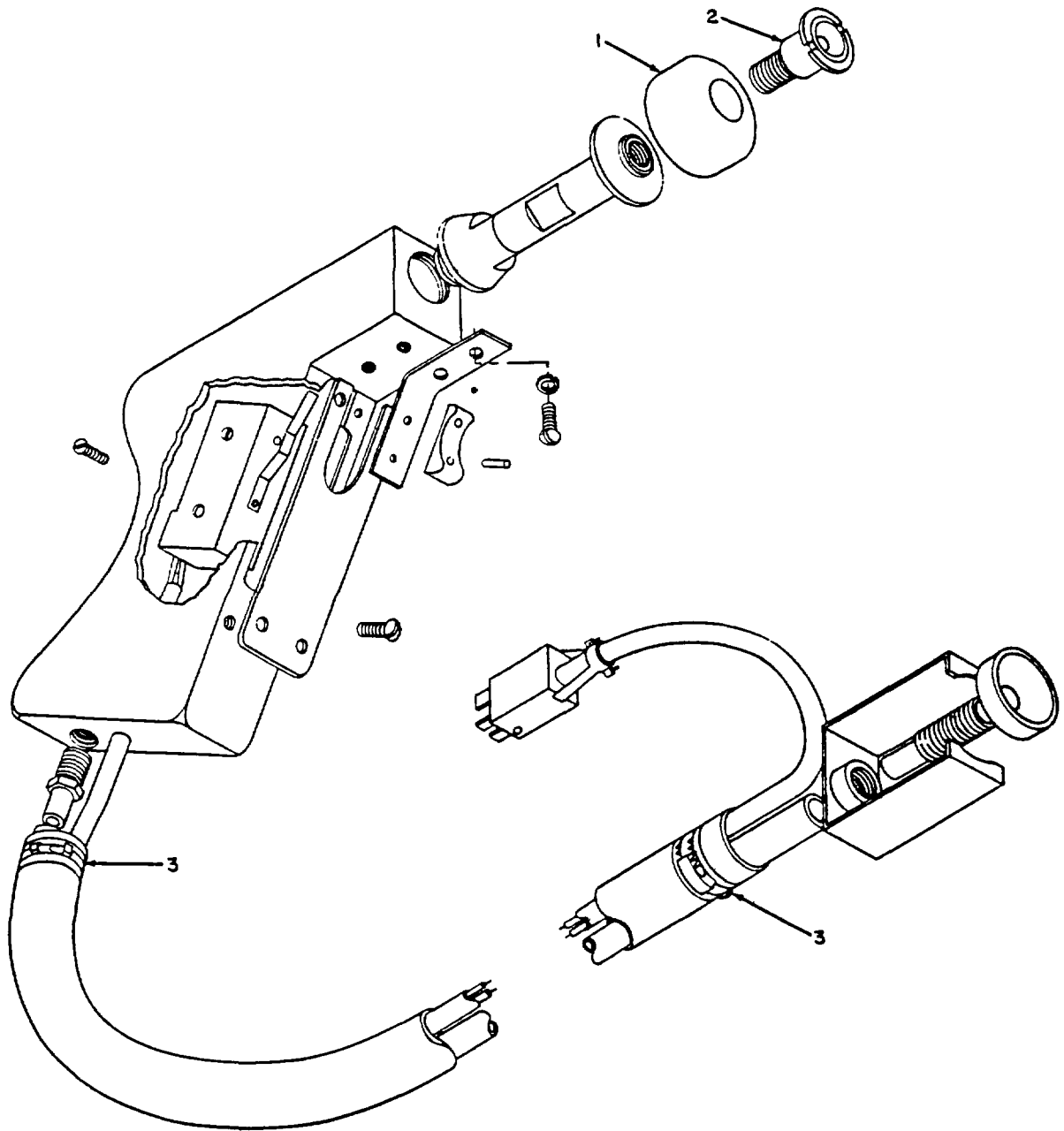


Figure 7. Test probe assembly.

INDEX NO.	S, M, R CODE				FEDERAL STOCK NUMBER	DESCRIPTION	UNIT OF ISSUE	EXPEND-ABILITY	QUANTITY PER UNIT	15-DAY ALW PER EQUIP DENSITY			ILLUSTRATIONS	
	MATERIAL CODE NO.	SOURCE	MAINTENANCE LEVEL	RECOVER-ABILITY						2ND ECHELON			FIG. NO.	ITEM NO.
										1-5	6-20	21-50		
284	3	P1	O		6665-798-3428	PLUNGER, TEST VALVE ASSEMBLY	ea		1	*	*	*		
285	3	P1	O		6665-070-5551	ADAPTER (Dwg B136-45-195)	ea		1	*	*	*		
286	3	P1	O		6665-070-5554	ADAPTER (Dwg B136-45-149)	ea		1	*	*	*		
287	3	P1	O		6665-798-3441	ADAPTER (Dwg A136-44-96)	ea		1	*	*	*		
288	3	P1	O		6665-798-8832	ADAPTER (Dwg A136-44-37)	ea		1	*	*	*		
289	3	P1	O		6665-798-8833	ADAPTER (Dwg A136-45-148)	ea		1	*	*	*		
290	3	P1	O		6665-798-8834	ADAPTER (Dwg A136-45-134)	ea		1	*	*	*		
291	3	P1	O		6665-070-5555	ADAPTER, CANISTER MOUNTING (Dwg C136-45-194)	ea		1	*	*	*		
292	3	P1	O		6665-070-5556	ADAPTER, TESTING (Dwg C136-45-196)	ea		1	*	*	*		
293	3	P1	O		6665-070-5550	ADAPTER ASSEMBLY (Dwg B136-45-190)	ea		1	*	*	*		
294	3	P1	O		6665-070-5549	BARREL ASSEMBLY (Dwg B136-45-191)	ea		1	*	*	*		
295	3	P1	O		6665-070-5553	CUP (Dwg A136-45-180)	ea		1	*	*	*		
296	3	P1	O		6665-784-9220	PLUNGER, TEST VALVE (Dwg A25-3-172)	ea		1	*	*	*		
297	3	P1	O		5330-799-6445	RETAINER (Dwg A136-45-146)	ea		1	*	*	*		
298	3	P1	O		6665-732-3394	TIP, TESTING (Dwg B136-45-181)	ea		1	*	*	*		

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3-47 (1)
3-147 (1)
3-500 (EA-EB) (1)

NG: State AG (3): Divisions (1).

USAR: None.

For explanation of abbreviations used, see AR 320-50.

TM 3-6665-209-20P

PIN: 025842-000