TECHNICAL MANUAL

OPERATOR'S AND AVIATION UNIT

MAINTENANCE MANUAL

(Including Repair Parts and Special Tools List)

FOR

DISPENSER, GENERAL PURPOSE AIRCRAFT: M130 PN 9311430 (1095-01-036-6886)

DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.

SUMMARY OF WARNINGS AND FIRST AID

The list summarizes critical WARNINGS in this manual. They are repeated here to let you know how important they are. Study these WARNINGS carefully; they can save your life and the lives of soldiers you work with.

WARNING

Personnel performing instructions involving operations, procedures, and practices which are included or implied in this technical manual shall observe the following instructions. Disregard of these warnings and precautionary information can cause serious injury or DEATH.

Read How to Use This Manual, Chapter 1 and Chapter 2 before starting any inspection, check, service, alinement or maintenance procedures.

LOADING

WARNING

Flare, chaff, or impulse cartridges that exhibit any sign of visible damage, or have been subjected to rough handling, will not be loaded into payload module assemblies. Unserviceable flare or impulse cartridges will be disposed of by Explosive Ordnance Disposal (EOD) personnel. Unserviceable chaff cartridges will be scrapped. Flare or chaff cartridges shall not be hammered or forced into payload module assemblies.

A mixture of flare and chaff cartridges shall not be loaded in a payload module assembly. Flare cartridges will not be loaded in aircraft installations specified for chaff cartridges only.

Payload module assemblies loaded with munitions must be handled with extreme care to avoid damage to plastic payload module assembly and ammunition. Modules with visible damage will not be used. Damaged munitions will be disposed of by EOD personnel.

If there is an indication that a misfire occurred, notify EOD personnel for disposition and disposal.

Be familiar with all safety precautions prior to handling ammunition to prevent injury or damage to equipment.

TEST AND MAINTENANCE

WARNING

Before installing the payload module assembly perform the following: on dispenser control panel, ensure ARM-SAFE switch is in the SAFE position and RIPPLE FIRE switch guard is in DOWN position. Ensure "Remove Before Flight" safety pin is installed. Ensure that the C-F selector switch index on dispenser assembly is pointing to correct position for flare (F) or chaff (C).

System tests must be performed to ensure there is no stray voltage. All aircraft power must be removed from the system prior to loading the payload module assembly into the dispenser assembly.

Keep hands and face away from the front of payload module assembly when sliding into or removing from dispenser assembly.

All aircraft power to the M130 general purpose dispenser system must be turned off prior to removal of payload module assembly from dispenser assembly. Safety pin(s) must be installed on electronics module assembly (ies) and/or exterior connection.

For aircraft with AN/ALQ-156(V) countermeasures set installed: do not allow personnel to stand within 3 feet of the transmit antenna when the AN/ALQ-156(V) equipment is on. High frequency electromagnetic radiation can cause internal burns without causing any sensation of heat. If you feel the slightest warming effect while near the transmit antenna, move away quickly.

Ensure payload module is not connected to dispenser assembly that is to be tested, and ensure that safety pin(s) is installed in safety switch(s).

If ARM lamp does not go out after safety pin is installed, DO NOT attempt to load the payload module assembly into the dispenser assembly.

FIRST AID

For further information on first aid, see FM 21-11 (TEST).

HEADQUARTERS DEPARTMENT OF THE ARMY

Washington D.C., 18 July 1995

Operator's and Aviation Unit Maintenance Manual

For

DISPENSER, GENERAL PURPOSE, AIRCRAFT: M130 PN 9311430 (1095-01-036-6886)

Current as of July, 1994 for appendix C

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 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: Director, Armament and Chemical Acquisition and Logistics Activity, ATTN: AMSTA-AC-MAS, Rock Island, IL 61201-9948. A reply will be furnished to you.

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This manual along with TM 9-1095-206-30&P supersedes TM 9-1095-206-23&P dated 15 November 1988, with changes.

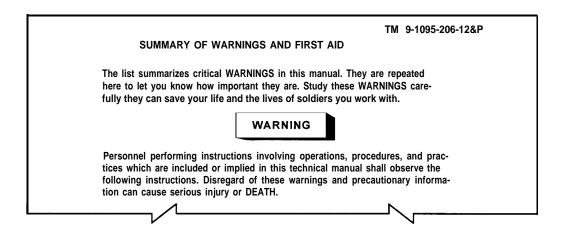
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HOW TO USE THIS MANUAL

This manual covers Operator's and Aviation Unit Maintenance (AVUM) levels maintenance support tasks for the M130 general purpose aircraft dispenser.

WHAT'S IN THE MANUAL - FRONT TO BACK



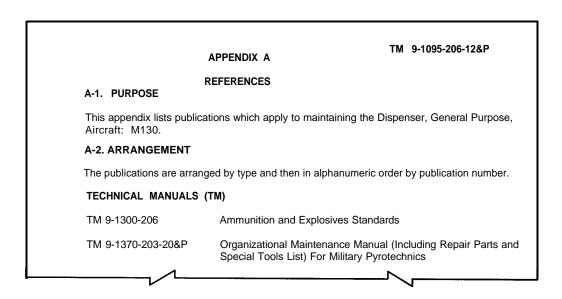
SUMMARY OF WARNINGS AND FIRST AID lists the warnings and first aid information in this manual. These warnings contain additional information about things that could hurt or kill personnel. The maintenance task may have a slightly different version of these warnings.

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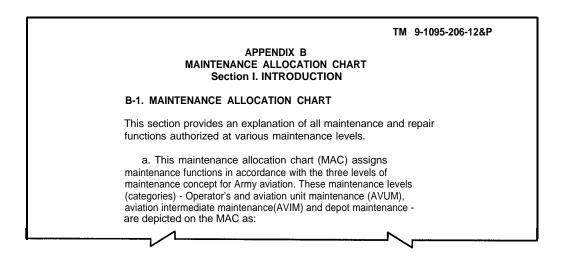
TABLE OF CONTENTS lists the chapters, sections, and appendixes in this manual. It also lists the pages where chapters, sections, and appendixes can be found.

CHAPTER 1 covers general information and gives a quick review of major components and features of the M130 general purpose aircraft dispenser.

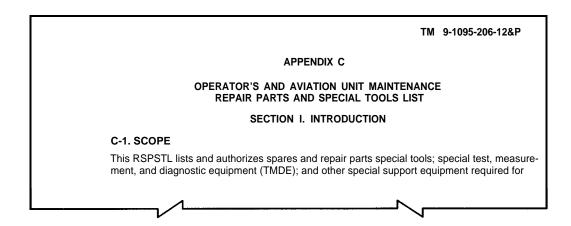
CHAPTER 2 contains information for Service Upon Receipt, PMCS, Troubleshooting, Loading and Unloading, Testing, Maintenance, and Preparation for Storage or Shippment authorized to be performed at the Operator's and Aviation Unit Maintenance (AVUM) level.



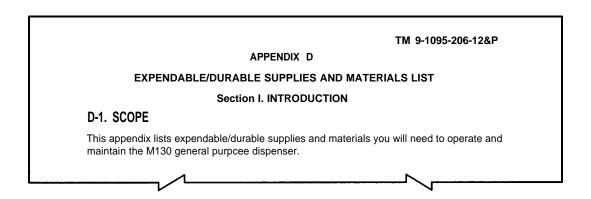
APPENDIX A lists references such as technical manuals and other publications to be used by personnel.



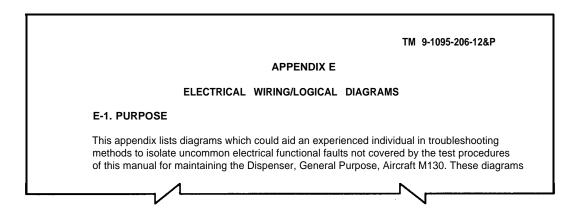
APPENDIX B provides an explanation of all maintenance and repair functions authorized at various maintenance levels.



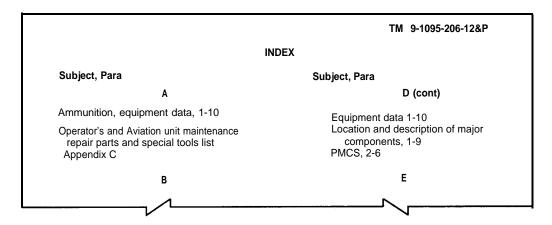
APPENDIX C lists repair parts and special tools required for the operation and performance of operator's and aviation unit and aviation intermediate maintenance.



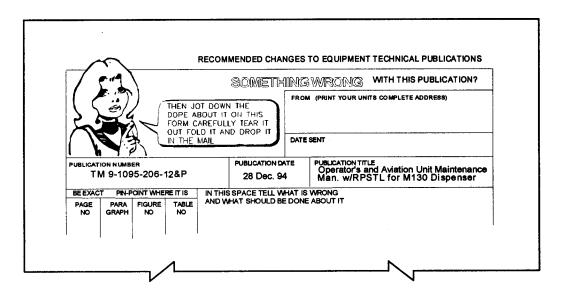
APPENDIX D lists expendable/durable supplies and materials used to maintain or repair the system.



APPENDIX E lists and provides electrical wiring/logical diagrams to aid in the troubleshooting of the M130 general purpose dispenser system.

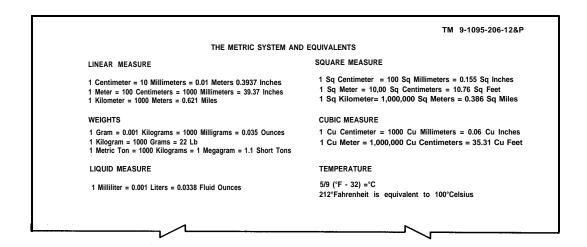


INDEX contains an alphabetical list of information. Usually each subject is presented in more than one way to make information easier to find.



DA FORM 2028-2 is used to recommend changes to the manual.

METRIC SYSTEM AND EQUIVALENTS provides information to convert between English and Metric equivalents.



USING YOUR MANUAL ON THE JOB

Like any tool, the best way to learn about this manual is to practice using it. Knowing how to use this manual will save both time and money.

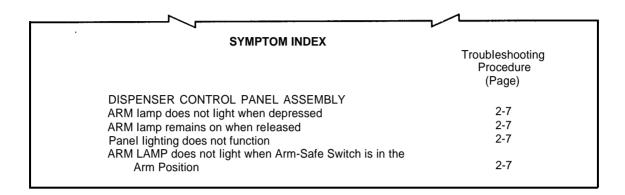
To help you find the information you need, each chapter and section of this manual begins with an index which lists the contents of the chapter and/or section by title and page/paragraph.

Where do you start?

A malfunction is discovered in one of two ways: during normal operation; or during normal maintenance such as inspection, PMCS, or other scheduled testing. The symptoms of the malfunction may be common or unusual, but identification of fault symptoms is the first step in the troubleshooting process.

Entry into the troubleshooting process is based on observed fault symptoms. It is important that you identify the fault symptoms as accurately as possible and then use the Symptom Index as an aid to identify the item that needs repair or replacement. If you feel confident that you have defined the fault symptoms as well as you can, you can refer directly to the Symptom Index.

The Symptom Index describes the more common fault symptoms that you may enmunter, specifies the actions to be taken, and references the places where these actions can be found.



How do you fix the problem - A Quick Overview

- Turn to the task referenced in the Symptom Index and read it carefully before starting. Pay attention to warnings and cautions. Get the equipment, supplies, and any other personnel needed. If a task requires part replacement, refer to the Repair Parts and Special Tools List (RPSTL), Appendix C.
- 2. Start with step 1 in the task and do each step in order. When the last step is done, the problem will be corrected.

Finding A Task

Using another manual could result in reference to a task in this manual. For example, you were referenced to this manual to find the task REPAIR OF FRONT AND REAR PANEL ASSEMBLY. To find where the task is located, refer to the Index at the back of this manual.

Using the INDEX

The Index lists each task under one or more headings. The task, REPAIR OF FRONT AND REAR PANEL ASSEMBLY could be found:

Under "F"

Front and rear panel assembly - Repair, 2-21

Turn to paragraph 2-21.

Beginning the Task

When you find paragraph 2-21, read the top half of the page. See the following example with its legend.

TM 9-1095-206-12&P (1)2-21. REPAIR OF FRONT AND REAR PANEL ASSEMBLY DESCRIPTION This task covers: Repair of the front and rear panel assembly. **INITIAL SETUP** Tool/Test and Support Equipment: Personnel Required Tool Kit, Electronic, Equipment **MOS 68N** TK-101/G **Equipment Conditions:** Materials/Parts: REPAIR OF FRONT AND Fuse (F02B32Y15A) **REAR PANEL ASSEMBLY** Lamp (MS25237-327) remove/replace fuse or lamp

Legend to Example Above

1. Title This is the paragraph/task number and name of the task. 2. Description This describes the overall actions you will perform. 3. These are the tools and equipment you will need to complete Tools the task. Tools found in the general electronic tool kit are not listed separately. 4. Materials These are the consumable materials you will need to do the task. Consumable materials are listed in the Expendable/Durable Supplies and Materials List (Appendix D). Use the Repair Parts and Special Tools List (RPSTL) to order the parts you need for the task. 5. Personnel Required This identifies the personnel and skill level needed to perform the task. **Equipment Conditions** This identifies the precondition functions that must be per-6. formed before you start the task.

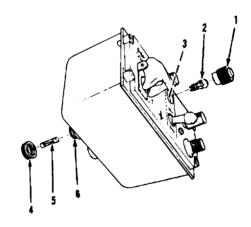
Using the Task Steps

Read through the task for step-by-step illustrated instructions. The numbered steps in capital letters tell WHAT to do and HOW to do it.

Below is the bottom half of the first page of the task, REPAIR OF FRONT AND REAR PANEL ASSEMBLY. As you read step 1, match each numbered part in the instructions with the same number in the illustration. It is important to do each step in the order given. Note the boxed word, REPAIR, in the top left corner. It labels the major actions for this task. In this and other tasks, you could also see boxed words like INSPECTION/REPAIR and ASSEMBLY.

REPAIR

- 1. UNSCREW
 INDICATOR LIGHT
 LENS (1) AND REMOVE
 LAMP (2) FROM
 INDICATOR LIGHT (3).
 ALSO INSPECT LAMP
 FOR CORROSION,
 BREAKS, AND
 DAMAGE.
- 2. UNSCREW FUSEHOLDER CAP (4) AND REMOVE FUSE (5) FROM FUSEHOLDER (6).
- 3. INSPECT FUSE FOR BROKEN ELEMENT AND DAMAGE.
- 4. REPAIR IS BY REPLACEMENT OF AUTHORIZED PARTS (APPX C) WHICH DO NOT MEET THE INSPECTION CRITERIA.



- INSTALL NEW FUSE (5) AND FUSEHOLDER CAP (4) ON FUSEHOLDER (6).
- 6. INSTALL NEW
 LAMP (2) AND
 INDICATOR LIGHT
 LENS (1) ON
 INDICATOR LIGHT (3).

DEFINITION OF TASK TERMS

Warnings, Cautions, and Notes

Pay attention to all warnings and cautions within the task. Ignoring a warning could cause death or injury to personnel. Ignoring a caution could cause damage to equipment. Notes contain facts to make the task easier. Both warnings and cautions always appear before the steps to which they apply.

WARNINGs: Call attention to conditions, practices, or procedures which could kill or injure personnel. Warnings are also listed in the front of the manual.

load module assembly is not

Ensure payload module assembly is not connected to dispenser assembly at any time during this test.

WARNING

CAUTIONs: Call attention to conditions, practices, or procedures which could damage equipment.



On the M92 test set, do not press STRAY VOLTAGE SELF TEST switch during the following system not reset test.

NOTEs: Contain essential information of special importance, interest, or aid in job performance to make the task easier

NOTE

Ensure that no cable or other object will block the flare simulator light from the flare sensor assembly.

Kinds of Tasks

"Repair"

Tasks which disassemble, inspect, repair, and assemble components.

". Test"

Tasks which test the functions of the armament subsystem for proper operation.

Comments on Tasks

The following comments apply to all tasks.

- 1. The term task or paragraph maybe used interchangeably.
- 2. Consumable materials are listed under materials.
- 3. Removed components must be cleaned, inspected, and reinstalled if found to be serviceable.
- 4. Cleaning and inspection must be done according to general maintenance instructions.
- A new component must be installed if inspection indicates a removed component is unserviceable.
- Disposition of unserviceable components must be handled in accordance with maintenance direction.

CHAPTER 1 INTRODUCTION

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Section I. GENERAL INFORMATION

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Destruction of Army Materiel to Prevent Enemy Use	1-3
Preparation for Storage or Shipment	1-4
Quality Assurance/Quality Control (QA/QC)	1-5
Reporting Equipment Improvement Recommendations (EIR)	1-6
Corrosion Information	1-7

1-1. **SCOPE**

The scope of this manual is listed below.

- 1. **Type of Manual.** Operator's and Aviation Unit Maintenance (AVUM).
- 2. Model Number and Equipment Name. M130 general purpose aircraft dispenser.
- **3. Purpose of Equipment.** Provides Army aircraft with effective countermeasure against hostile radarguided weapon systems and infrared-seeking missile threats.

1-2. MAINTENANCE FORMS, RECORDS, AND REPORTS

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA PAM 738-751, The Army Maintenance Management System Aviation (TAMMS-A).

1-3. DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE

Refer to TM 750-244-1-5 for destruction of ammunition. Refer to TM 750-244-7 for destruction of the M130 general purpose dispenser.

1-4. PREPARATION FOR STORAGE OR SHIPMENT

Instructions for processing and packaging the M130 general purpose dispenser for storage or shipment are given in in chapter 2.

1-5. QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

Refer to applicable technical publications for all pertinent QA/QC information.

1-6. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR'S)

If your M130 general purpose dispenser needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design. Put it on an SF 368 (Quality Deficiency Report). Mail it direct to: Commander, Armament Research, Development and Engineering Center (ARDEC), ATTN: AMSTA-AR-QAW (R), Rock Island, IL 61299-7300. We'll send you a reply.

1-7. CORROSION INFORMATION

Corrosion prevention and control (CPC) of Army materiel is a continuing concern. It is important that any corrosion problems with this item be reported so that the problem can be corrected and improvements can be made to prevent the problem in future items.

While corrosion is typically associated with rusting of metals, it can also include deterioration of other materials such as rubber and plastic. Unusual cracking, softening, swelling, or breaking of these materials may be a corrosion problem.

If a corrosion problem is identified, it can be reported using Standard Form 368, Quality Deficiency Report. Use of key words such as "corrosion", "rust", or "cracking" will assure that the information is identified as a CPC problem.

The form should be submitted to:

Commander
U.S. Army Armament Research, Development and Engineering Center
AITN: AMSTA-AR-QAW (R)
Rock Island, IL 61299-7300

Section II. EQUIPMENT DESCRIPTION AND DATA

Section Contents	<u>Para</u>
Equipment Characteristics, Capabilities, and Features	1-8
Location and Description of Major Components	1-9
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Safety, Care, and Handling	1-11

1-8. EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES

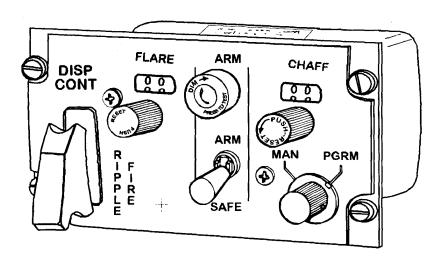
The characteristics, capabilities, and features of the M130 general purpose dispenser are listed below.

- **1. Characteristics.** Electrically-powered and constructed of modules for fast replacement.
- **2. Capabilities and Features.** Can disperse either thirty decoy flares or thirty chaff cartridges as applicable. Additional dispenser assembly and payload module assembly on specific aircraft will increase the capability of the system.

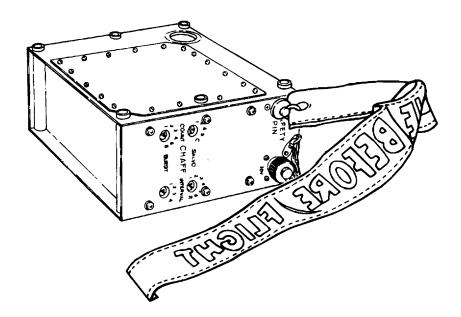
1-9. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS

The M130 general purpose dispenser consists of the following major components.

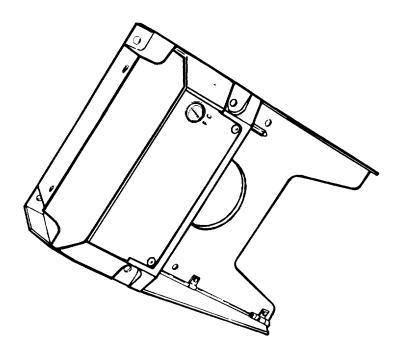
1. Dispenser Control Panel Assembly (DCP). Mounted inside the aircraft, it has the necessary controls to fire the chaff or flare in either programmed or manual modes. The counters indicate the number of chaffs or flares remaining in the payload module assembly. The counters are manually set prior to each mission to agree with the number of chaffs or flares loaded.



2. Electronics Module Assembly (EM). Attached either internally or to the external surface of the aircraft, it contains a programmer and a cable assembly which includes a 28-volt supply receptacle and a safety pin with flag assembly. On some aircraft installations the 28-volt supply receptacles and the safety switch have been relocated in the aircraft cable and are therefore remote from the EM.



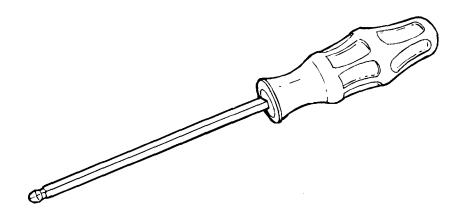
3. Dispenser Assembly. Attaches to the electronics module assembly or the external surface of the aircraft. It contains the breech, flare sensor, selector switch (C and F) for chaff or flare, reset switch, and housing. The housing contains the sequencer assembly which furnishes impulses to fire (in sequential order) each of the impulse cartridges.



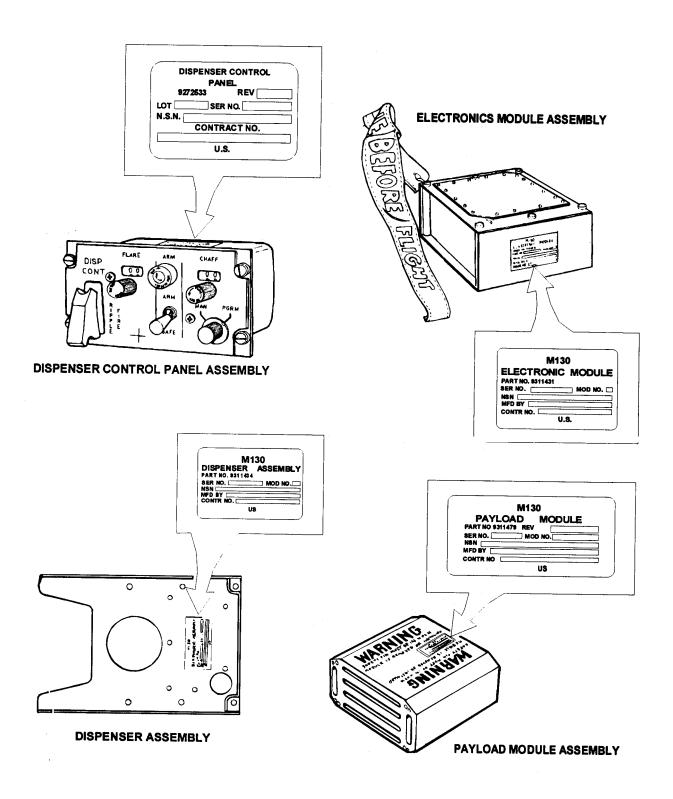
4. Payload Module Assembly. Attaches to the dispenser assembly and consists of a payload module and retaining plate. The module has thirty chambers which will accept either chaff or flare cartridges.



5. Ball Hexagonal Key Screwdriver. Used to connect M91 test set to dispenser assembly and dispenser test adapter to dispenser assembly. This is a component of the M91 test set.



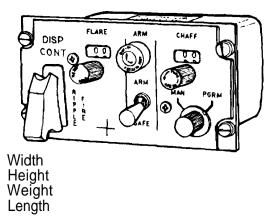
6. Data Plates. Refer to the following illustrations for the locations of dataplates.



1-10. EQUIPMENT DATA

Equipment data for M130 general purpose dispenser is provided in the following tabulations.

1. Dispenser Control Panel Assembly



US CUSTOMARY METRIC

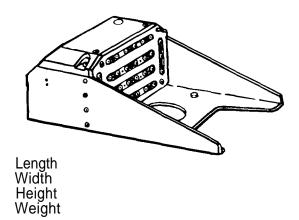
 5.75 in.
 14.61 cm

 3.00 in.
 7.62 cm

 1.30 lb
 0.59 kg

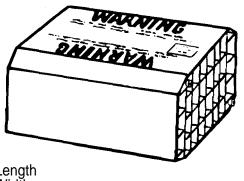
 3.13 in.
 13.03 cm

2. Dispenser Assembly



12.93 in.	32.84 cm
8.95 in.	22.73 cm
4.53 in.	11.51 cm
9.01 lb	4.10 kg
3.01 10	7.10 Ng

3. Payload Module Assembly



8.12 in.	20.62 cm
8.65 in.	22.05 cm
4.43 in.	11.25 cm
2.50 lb	1.13 kg
	8.65 in. 4.43 in.

4. Electronics Module Assembly (Safety pin installed)

			US CUSTOMARY	METRIC
		Length Width Height Weight	8.95 in. 7.62 in. 3.84 in. 4.80 lb	22.73 cm 19.35 cm 9.75 cm 2.18 kg
5.	Weig	hts		
	Comp	olete system with 30 chaff cartridges olete system with 30 flare	25.0 lb	11.34 kg
	Chaff Flare Drum Shipp	cartridges (30 cartridges) (30 cartridges) , metal shipping ping weight of system without munition	28.0 lb 9.9 lb 12.9 lb 25.0 lb	12.70 kg 4.49 kg 5.85 kg 11.34 kg
6.	Munit		49.0 lb	22.23 kg
0.	a.	Weight		
	u.	Chaff cartridge (30 each/system) Flare cartridge (30 each/system) Impulse cartridge (60/can and 36 cans/box)	0.33 lb/unit 0.43 lb/unit 0.141 oz/unit	0.15 kg/unit 0.20 kg/unit 0.06 kg/unit
	b.	M206 Aircraft Countermeasure Flare	0.1111 02/arm	0.00 kg/arm
		Length Width Height Shipping: Quantity-distance class Storage compatibility group DOT shipping class DOT markings SPECIAL FIREWORKS HANDLE CAREFULLY- KEEP FIRE AWAY		20.52 cm 2.51 cm 2.51 cm

		US CUSTOMARY	METRIC
C.	M1 and RR-170A/AL Countermeasur	e Chaff	
	Length Width Height	8.08 in. 0.99 in. 0.99 in.	20.52 cm 2.51 cm 2.51 cm
d.	M796 Impulse Cartridge		
	Length Diameter (flange) Diameter (body) Shipping:	0.500 in. 0.625 in. 0.490 in.	1.27 cm 1.59 cm 1.24 cm
	Quantity-distance class Storage compatibility group DOT shipping class DOT markings	1.4 G or S ^c Class C Explosive-Ha	ındle Carefully

1-11. SAFETY, CARE, AND HANDLING

The following special safety precautions apply.

- 1. Before installing a loaded payload module assembly, perform the system tests according to the procedures in chapter 2.
- 2. Chaff, flare, and impulse cartridges will be kept away from all fires and excessively high temperatures.
- 3. Impulse cartridges must be handled with extreme care. Each cartridge generates an extremely high gas pressure and temperature if accidentally initiated. Under no circumstances will a chaff or flare cartridge be hammered or forced into a payload module assembly.
- **4.** The safety pin flag, "remove before flight" must be installed in the safety switch when the aircraft is parked. Safety pin is removed only to perform authorized tests or immediately prior to take-off.
- **5.** Avoid exposure to high concentration of chaff, which can cause temporary irritation to eyes and/or throat.
- **6.** Munition shipping containers will be protected at all times from excessive heat and rain in storage. They must not be stored near radiators or other heat sources.
- 7. The remaining units in a munition shipping container that have been opened and only partially emptied, will be secured in the container with appropriate type of packing material to protect contents against moisture and jostling.
- **8.** All munitions in storage must be retained in their original shipping containers. Only one shipping container will be opened at a time.
- 9. Loading of impulse cartridges into chaffs or flares will be accomplished one at a time.

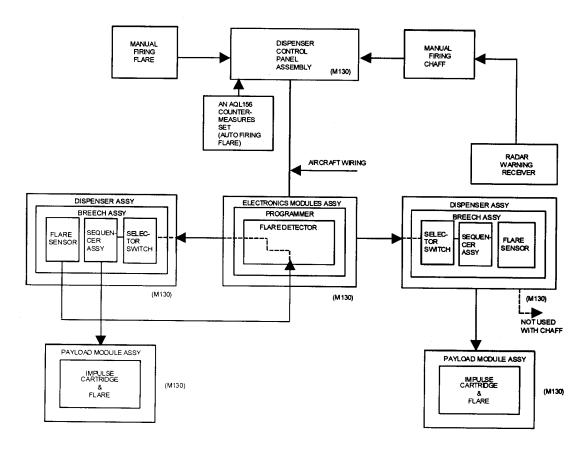
- 10. Chaff, flare, and impulse cartridges must not be dropped, rolled, or handled in a rough or careless manner. Chaff, flare, or impulse cartridges that exhibit any sign of visible damage, or have been subjected to rough handling, will not be loaded into payload modules. Unserviceable flare or impulse cartridges will be disposed of by EOD personnel. Unserviceable chaff cartridges will be scrapped.
- 11. Payload module assemblies loaded with these munitions must be handled with extreme care to avoid striking or dropping. The plastic material, of which the payload module is made, may crack or split when subjected to impact. Loaded payload module assemblies that have been dropped or roughly handled and visibly damaged will not be used. Damaged munitions will be disposed of by EOD personnel.
- **12.** Refer to TM 9-1300-206, Ammunition and Explosives Standards, for general ammunition care, handling, and safety.

Section III. PRINCIPLES OF OPERATION

Section Contents	<u>Para</u>
General	1-12
Functional Description	1-13

1-12. GENERAL

General principles of operation of the M130 general purpose dispenser system are illustrated in the following functional block diagram.



1-13. FUNCTIONAL DESCRIPTION

The M130 general purpose dispenser system provides effective survival countermeasures against radar guided weapon systems and/or infrared seeking missile threats. It has the capacity of dispensing 30 chaff or flare cartridges.

The principles of operation for the M130 general purpose dispenser are described in the following information.

- 1. Dispenser Control Panel Assembly. The dispenser control panel assembly (DCP) contains a manual ARM-SAFE switch which is provided to arm the dispenser system. When the ARM-SAFE switch is moved to the ARM position and the safety flag pin(s) has been removed from the system safeing switch(s), the ARM lamp will light. The flare ripple fire switch, when activated, will salvo fire all remaining flares in the event of an inflight emergency. The two-way MANUAL, PROGRAMMED switch controls the firing of chaff only. When the switch is in PROGRAMMED position, the number of bursts (series of shots) per salvo (any number of bursts) fired is automatically controlled by the preset programmer. The MANUAL position of the switch bypasses the programmer and fires one chaff cartridge each time the firing switch is activated.
- 2. Dispenser Assembly. The sequencer assembly receives power through the firing switches circuit and furnishes pulses to each of the 30 contacts of the breech assembly, in sequential order 1 through 30. Flare/Chaff (F/C) selector switch allows selection between flare or chaff dependant on aircraft configuration. It also contains a flare detector to assure a burning flare is ejected from the aircraft.
- 3. Payload Module Assembly. Chaffs or flares are loaded through the studded end of the payload module, one per chamber, and secured in place by the retaining plate.
- **4. Electronics Module Assembly.** It contains a programmer circuit which allows for the setting of chaff burst number, chaff salvo number, chaff burst interval, and chaff salvo interval.

CHAPTER 2 AVIATION UNIT MAINTENANCE INSTRUCTIONS

	CHAPTER CONTENTS	
		Page
Section I Section II Section III Section IV Section V Section VI Section VIII Section IX Section X Section XI Section XII	Repair Parts, TMDE, and Support Equipment Service Upon Receipt Preventive Maintenance Checks and Services (PMCS) Troubleshooting Aviation Unit Testing Procedures Maintenance of Payload Module Assembly Maintenance of Dispenser Assembly Maintenance of Electronics Module Assembly Maintenance of Dispenser Control Panel Assembly Aviation Testing Procedures (On Aircraft) Preparation for Storage or Shipment Payload Module Assembly Loading and Unloading	2-1 2-2 2-2 2-4 2-14 2-39 2-43 2-47 2-50 2-55 2-80 2-81

Section I. REPAIR PARTS, TMDE, AND SUPPORT EQUIPMENT

Section Contents	<u>Para</u>
Common Tools and Equipment	2-1
Repair Parts	2-2

2-1. COMMON TOOLS AND SUPPORT EQUIPMENT

For authorized common tools and equipment, refer to the Modified Table of Organization and Equipment (MTOE) applicable to your unit.

2-2. REPAIR PARTS

Repair parts are listed and illustrated in appendix C of this manual.

Section II. SERVICE UPON RECEIPT

Section Contents	<u>Para</u>
General	2-3
Checking Unpacked Equipment	2-4

2-3. GENERAL

Avoid damaging the container during the unpacking operation. The container with cushioning material is to be kept at unit level for later use in storing or shipping the M130 general purpose dispenser.

2-4. CHECKING UNPACKED EQUIPMENT

Check the equipment against the packing slip to see if the shipment is complete. Report all discrepancies in accordance with the instructions of DA PAM 738-751.

Inspect the equipment for damage incurred during shipment. If the equipment has been damaged, report the damage on SF FORM 364, Report of Discrepancy (ROD).

Check to see whether the equipment has been modified.

Test in accordance with paragraphs 2-9 thru 2-11.

Section III. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

Section Contents	<u>Para</u>
General Preventive Maintenance Checks and Services	2-5 2-6

2-5. GENERAL

To ensure maximum operational readiness, it is necessary that the M130 general purpose dispenser be systematically inspected at regular intervals so defects maybe discovered and corrected before they result in serious damage or failure.

2-6. PREVENTIVE MAINTENANCE CHECKS AND SERVICES

Table 2-1 lists those preventive maintenance checks and services to be performed at their designated intervals.

Column 1, Item No. The first column contains the item number which shall be used as a source of item numbers for the TM Number Column on DA Form 2404, Equipment Inspection and Maintenance Worksheet, in recording results of PMCS. Checks and services are numbered in logical order of performance regardless of the interval.

Column 2, Interval. The second column tells when to do a certain check or service.

Column 3, Item to be Inspected. The third column lists the item to be inspected.

Column 4, Procedures. The fourth column contains all the information required to be accomplished before equipment is considered to be fully mission capable.

Table 2-1. OPERATOR'S AND AVIATION UNIT PREVENTIVE MAINTENANCE CHECKS AND SERVICES

B-Before M-Monthly H-Hours

Item			-	Item to be Inspected/	Equipment not ready/
No.	В	M	Н	Procedure	Available If:
1	•	•		Electronics Module Assembly a. Check for obvious physical damage.	Obvious physical damage includes broken and/or missing switches or knobs; loose or damaged hardware; or missing insulation or damaged connector.
	•			b. Check for missing safety pin and/or that safety pin will not enter safety switch.	safety pin missing or bent. (Replace safety pin (para 2-18).
				NOTE	
				If system is to dispense chaff, ensure preplanned chaff program is set IAW Mission Control Officer's Directive.	
2				Dispenser Assembly	
	•	•		Check for obvious physical damage.	Obvious physical damage includes broken and/or missing switches or knobs: loose or damaged hardware.
		•		b. Check breech for missing or damaged grounding springs and receptacles insert.	Grounding springs missing or damaged. (Replace grounding springs). IF missing or damaged inserts, return to AVIM.
	•			c. Check chaff/flare mode switch. Switch action should lock into detent position.	Switch will not lock into detent position.
3				Dispenser Control Panel Assembly	
		•		Check panel for legability. IF not legable, replace.	

2-6. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (cont)

Table 2-1. OPERATOR'S AND AVIATION UNIT PREVENTIVE MAINTENANCE CHECKS AND SERVICES (cont)

B-Before M-Monthly H-Hours

Item	em Interval		al	Item to be Inspected/	Equipment not ready/
No.	В	M	\pm	Procedure	Available If:
4				Payload Module Assembly	
		•		 a. Check for damaged studs that would prevent installation to the dispenser assembly, 	If damaged, replace.
		•		 b. Check for missing or damaged screws and round nuts on retaining plate. 	Replace as required (para 2-13).
	•	•		c. Check for cracks.	If cracked, replace.
5				M130 Dispenser	
		•	•	 a. Check dispenser and cartridge for cleanliness. Every 25 flying hours (use leak test compound). 	Clean as required.
		•	•	 b. Perform power-up check (MOC) on all aircraft every 25 flying hours or monthly whichever comes first. 	M130 does not function. Replace.

Section IV. TROUBLESHOOTING

Section Contents	<u>Para</u>
Troubleshooting Information	2-7

2-7. TROUBLESHOOTING INFORMATION

This section contains the troubleshooting information for locating and correcting most of the troubles which may develop in the M130 general purpose dispenser. Each malfunction for an individual component, unit, or system is followed by a list of tests or inspections which will help you to determine the proper corrective actions to remedy the malfunctions. Perform the tests/inspections and corrective actions in the order listed.

The symptom index can be used as a quick guide to troubleshooting. Common malfunctions are listed in alphabetical order with a page number reference to the troubleshooting table where a test or inspection and corrective action are provided.

This manual cannot list all possible malfunctions which may occur, nor all tests or inspections and corrective actions. If a malfunction is not listed (except when malfunction and cause are obvious), or is not corrected by listed corrective actions, notify aviation intermediate maintenance.

SYMPTOM INDEX

	Troubleshooting Procedure (Page)
DISPENSER CONTROL PANEL ASSEMBLY	
ARM lamp does not light when depressed ARM lamp remains on when released Panel lighting does not function Arm Lamp does not light when Arm-Safe Switch is in the Arm Position Flare or Chaff Counter Readings do not correspond to number cartridges dispensed	2-7 2-7 2-7 2-7
ELECTRONICS MODULE ASSEMBLY	
Chaff cartridges do not dispense in accordance with preset program Additional Flares are not dispensed when first Flare dispensed fails to ignite	2-8 2-9
DISPENSER ASSEMBLY	
Three Flares are dispensed each time the dispense button is activated	2-9
AVIATION UNIT SYSTEM TESTS	
ARM lamp or POWER ON lamp lights with M91 test set at START/HOME position with PWR ON switch off Countdown is complete, green DISP COMP light won't light Flare counter does not fire in sequence of three STRAY VOLTAGE lamp does not light STRAY VOLTAGE lamp lights SYSTEM NOT RESET lamp lights	2-9 2-11 2-11 2-10 2-10 2-10
ELECTRICAL SYSTEM TESTS (ON AIRCRAFT)	
ARM lamp does not go out ARM lamp does not light and/or flare counter reads other than	2-13
00 and all FOI'S remain red ARM lamp does not light when depressed ARM lamp does not light with ARM-SAFE switch to ARM Firing order indicator (FOI) no. 1 remains red Flare counter reads other than 29	2-13 2-12 2-12 2-12 2-12
FOI no. 1 remains red and/or chaff counter reads other than 29 FOI'S no. 1, 2, and 3 change to white Less than 2 seconds or more than 3 seconds delay occurs be-	2-13 2-12
tween groups of 3 counts on flare counter (or FOI'S)	2-13

2-7. TROUBLESHOOTING INFORMATION (cont)

SYMPTOM INDEX (cont)

	Troubleshooting Procedure (Page)
ELECTRICAL SYSTEM TESTS (ON AIRCRAFT) (cont)	
One or more FOI's remain red and/or flare counter does not show correct number	2-13
One or more FOI'S remain red and/or flare counter reads other than 00	2-12
One or more FOI's remain red and/or flare counter reads other than 26	2-13
POWER ON lamp does not light	2-12
Some FOI's change but do not total program count	2-13

Table 2-2. TROUBLESHOOTING

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION	
If correct	tion, notify AVIM.		
DISPENSER CONTROL PANE	EL ASSEMBLY		
1. ARM LAMP DOES NOT LIGHT WHEN DEPRESSED.	Step 1. Ensure aircraft power is applied.		
	Step 2. Check fuse in DCP.	a. Replace Fuse (para 2-21).	
		b. If replacement of fuse does not correct malfunction, proceed to step 3.	
	Step 3. Check ARM lamp.	a. Replace lamp (para 2-21).	
		b. If replacement of lamp does not correct malfunction, pro- ceed to step 4.	
	Step 4. Perform electrical test on aircraft cable	a. If malfunction is indicated in step 4, replace DCP.	
	connector P1 to DCP.	b. Check pin H for 28 VDC and pin V for grid.	
		c. If step 4 indicates a malfunction, refer to powered circuit maintenance instructions in applicable aircraft TM.	
2. ARM LAMP REMAINS ON WHEN RELEASED.		Replace DCP (para 2-19).	
3. PANEL LIGHTING DOES NOT FUNCTION.	Step 1. Check if there is aircraft power to DCP.	Ensure aircraft power is applied.	
	Step 2. Check DCP fuse.	Replace fuse (para 2-21).	
4. ARM LAMP DOES NOT LIGHT WHEN ARM-	NOTE	If test confirms the malfunction, replace DCP and repeat test.	
SAFE SWITCH IS IN ARM POSITION.	Remove, "Remove before flight" safety pin.	b. If malfunction is still indicated. replace EM and repeat test.	
	Perform dispenser safety test in pararaph 2-25 (chaff) or paragraph 2-26 (flare (Test on Aircraft)).	c. If malfunction is still indicated, re- place dispenser assembly and re- peat test.	
	(liale (1651 OII AllClait)).	d. If test (performed on aircraft) still indicates a malfunction, refer to maintenance instructions for installation hardware in applicable aircraft TM.	

2-7. TROUBLESHOOTING INFORMATION (cont)

Table 2-2. TROUBLESHOOTING (cont)

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION			
NOTE If corrective action still reflects malfunction, notify AVIM.					
\$5. FLARE OR CHAFF COUNTER READINGS DO NOT CORRESPOND TO NUMBER OF CARTRIDGES DISPENSED	Perform electrical system test in paragraph 2-25 for chaff or paragraph 2-26 for flare (test on aircraft). (This test will reveal malfunction prior to operation.)	 a. If no malfunction is indicated, report malfunction to EOD. b. If test confirms the malfunction, replace DCP and repeat test. c. If malfunction is still indicated, replace EM and repeat test. d. If malfunction is still indicated, replace dispenser assembly and repeat test. e. If test (performed on aircraft) still indicates a malfunction, refer to maintenance instructions for installation hardware in applicable aircraft TM. 			
ELECTRONICS MODULE ASS	SEMBLY				
6. CHAFF CARTRIDGES DO NOT DISPENSE IN ACCORDANCE WITH PRESET PROGRAM.	Perform electrical system test in paragraph 2-25 (test on aircraft). (This test will reveal malfunction prior to operation.)	 a. If no electrical malfunction is indicated, report malfunction to EOD. b. If test confirms the malfunction, replace dispenser control panel assembly (DCP) and repeat test. c. If malfunction is still indicated, replace electronics module assembly (EM) and repeat test. d. If malfunction is still indicated, replace dispenser assembly and repeat test. e. If test (performed on aircraft) still indicates a malfunction, refer to maintenance instructions for installation hardware in applicable aircraft TM. 			

Table 2-2. TROUBLESHOOTING (cont)

MALFUNCTION	TES	T OR INSPECTION	CORRECTIVE ACTION
NOTE If corrective action still reflects malfunction, notify AVIM,			
7. ADDITIONAL FLARES ARE NOT DISPENSED WHEN FIRST FLARE DISPENSED FAILS TO IGNITE.	Perform electrical system test in paragraph 2-26 (test on aircraft) to confirm malfunction. (Electrical system test will reveal malfunction prior to operation.)		Replace EM and repeat test.
DISPENSER ASSEMBLY			
8. THREE FLARES ARE DISPENSED EACH TIME DISPENSE BUTTON IS ACTIVATED.	Perform electrical system test in paragraph 2-26 (test on aircraft). (Electrical system test will reveal malfunction prior to operation.)		a. If test confirms the malfunction, replace EM and repeat test.b. If malfunction is still indicated, replace dispenser assembly and repeat test.
AVIATION UNIT SYSTEM TES	STS		
9. ARM LAMP OR POWER ON LAMP LIGHTS WITH M91 TEST SET AT START/HOME POSITION WITH PWR ON SWITCH OFF.	Step 1.	Check for dust, for- eign particles or moisture on breech and mounting plate of dispenser assem- bly when connecting M91 test set.	Remove dust or foreign particles, using a soft-haired brush (item 2, Appx D). Remove moisture with clean, lint-free cloth (item 3, Appx D). Retest (para 2-10 or 2-11).
	Step 2.	Check setup procedures (para 2-10 or 2-11).	 a. If setup procedures are incorrect, make necessary adjustment(s). b. If malfunction is still indicated, replace DCP and/or EM and retest (para 2-10 or 2-11). c. If malfunction is still indicated, replace M91 test set and retest (para 2-10 or 2-11). d. If malfunction is still indicated, notify AVIM.

2-7. TROUBLESHOOTING INFORMATION (cont)

Table 2-2. TROUBLESHOOTING (cont)

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION	
NOTE If corrective action still reflects malfunction, notify AVIM.			
10. STRAY VOLTAGE LAMP LIGHTS.	Check for dust, foreign particles, or moisture on breech and mounting plate of dispenser assembly.	 a. Remove dust or foreign particles using a soft-haired brush (item 2, Appx D). Remove moisture with clean, lint-free cloth (item 3, Appx D). Retest (para 2-10 or 2-11). b. If malfunction is still indicated, replace DCP, EM, and/or dispenser assembly and retest (para 2-10 or 2-11). c. If malfunction is still indicated, replace M91 test set and retest (para 2-10 or 2-11). d. If malfunction is still indicated, troubleshoot M130 aircraft wiring (refer to applicable TM) and retest (para 2-10 or 2-11). 	
		e. If malfunction is still indicated, notify AVIM.	
11. STRAY VOLTAGE LAMP DOES NOT LIGHT.	Check for dust, foreign particles, or moisture on breech and mounting plate of dispenser assembly.	a. Remove dust or foreign particles with soft-haired brush (item 2, Appx D). Remove moisture with clean, lint-free cloth (item 3, Appx D). Retest (para 2-10 or 2-11). b. If malfunction is still indicated, replace M91 test set. C. If malfunction is still indicated, notificated.	
		tify AVIM.	
12. SYSTEM NOT RESET LAMP LIGHTS.	Check for dust, foreign particles or moisture on breech and mounting plate of dispenser assembly.	 a. Remove dust or foreign particles using a soft-haired brush (item 2, Appx D). Remove moisture using a clean, lint-free cloth (item 3, Appx D). Retest (para 2-10 or 2-11). b. If malfunction is still indicated, replace dispenser assembly. c. If malfunction is still indicated, notify AVIM. 	

Table 2-2. TROUBLESHOOTING (cont)

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
NOTE		
If corrective action still reflects malfunction, notify AVIM.		

CAUTION

Make certain that you connect the proper connector to the control jack - J2 (AN/ALQ-56(J2)). The flare dispenser has the same mating connector as the connector for the control indicator jack - J2 (AN/ALQ-156(J2)). The flare dispenser connector (M130 (J1)) is located next to the control indicator connectors in the aircraft wiring harness. If the control indicator connector AN/ALQ-156(J2)) and the flare dispenser connector (M130(J1)) are reversed, the CM SET, flare dispenser, and aircraft wiring maybe

damaged.		
13. FLARE COUNTER DOES NOT FIRE IN SEQUENCE OF THREE.	Check for dust, foreign particles, or moisture on breech and mounting plate of dispenser assembly.	Remove dust or foreign particles with a soft-haired brush (item 2, Appx D). Remove moisture with clean, lint-free cloth (item 3, Appx D). Retest (para 2-10 or 2-11).
	Where applicable, verify that the CM-INOP lamp on the master caution panel is off. (If lit, refer to TM 11-5865-263-	 a. If malfunction is still indicated, replace DCP, EM, and/or AN/ALQ-156(V).
	12).	 b. If malfunction is still indicated troubleshoot MI 30 aircraft wrong. Refer to applicable aircraft TM.
		c. If malfunction is still indicated, no- tify AVIM.
14. COUNT DOWN IS COMPLETE, GREEN DISP COMP LIGHT WON'T LIGHT.	Check for dust, foreign particles, or moisture on breech and mounting plate of dispenser assembly.	a. Remove dust or foreian particles using a soft-haired brush (item 2, Appx D). Remove moisture with clean, lint-free cloth (item 3, Appx D). Retest (para 2-10 or 2-11).
		 b. If malfunction is still indicated, replace dispenser assembly, EM, DCP, and/or M91 test set.
		c. If malfunction is still indicated troubleshoot M130 aircraft wrong. Refer to applicable aircraft TM.
		d. If malfunction is still indicated, no- tify AVIM.

2-7. TROUBLESHOOTING INFORMATION (cont)

Table 2-3. TROUBLESHOOTING

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION		
NOTE If corrective action still reflects malfunction, notify AVIM.				
ELECTRICAL SYSTEM TESTS	ELECTRICAL SYSTEM TESTS (TEST ON AIRCRAFT)			
1. POWER ON LAMP DOES NOT LIGHT.	Step 1. Check test set fuse.	Replace fuse (TM 9-4940-497- 13&P).		
	Step 2. Check test set lamp.	Replace lamp (TM 9-4940-497- 13&P).		
	Step 3. Check test set light fixture.	Replace test set (TM 9-4940-497-13&P).		
2. ARM LAMP DOES NOT LIGHT WHEN DEPRESSED.	Step 4. Check aircraft power to DCP (if test is on aircraft).	Ensure aircraft power is applied.		
	Step 5. Check DCP fuse.	Replace fuse (para 2-21).		
	Step 6. Check ARM lamp.	Replace ARM lamp (para 2-21).		
	Step 7. Check DCP	Replace DCP.		
3. ARM LAMP DOES NOT LIGHT WITH ARM-SAFE	Step 1. Check DCP.	Replace DCP.		
SWITCH TO ARM.	Step 2. Check EM cable assembly.	Replace EM.		
4. FIRING ORDER	Step 1. Check DCP.	Replace DCP.		
INDICATOR (FOI) NO. 1 REMAINS RED.	Step 2. Check EM.	Replace EM.		
5. FOI'S NO. 1, 2, AND 3 CHANGE TO WHITE.	Check EM.	Replace EM.		
6. FLARE COUNTER READS OTHER THAN	Step 1. Check flare counter.	Replace DCP.		
29.	Step 2. Check EM.	Replace EM.		
7. ONE OR MORE FOI'S REMAIN RED AND/OR	Step 1. Check DCP.	Replace DCP.		
FLARE COUNTER READS OTHER THAN 00.	Step 2. Check EM or dispenser assembly.	Replace EM or dispenser assembly.		

Table 2-3. TROUBLESHOOTING (cont)

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION	
NOTE If corrective action still reflects malfunction, notify AVIM.			
8. ONE OR MORE FOI'S	Step 1. Check EM.	Replace EM.	
REMAIN RED AND/OR FLARE COUNTER DOES NOT SHOW CORRECT NUMBER.	Step 2. Check dispenser assembly.	Replace dispenser assembly.	
CORRECT NUMBER.	Step 3. Check FLARE counter.	Replace DCP.	
	Step 4. Check FLARE DISP button or FLARE HAND switch.	Refer to applicable aircraft manual.	
9. LESS THAN 2 SECONDS OR MORE THAN 3 SECONDS DELAY OCCURS BETWEEN GROUPS OF 3 COUNTS ON FLARE COUNTER (OR FOI'S).	Check defective intervalometer of "A" kit.	Refer to applicable aircraft maintenance manual.	
10. ARM LAMP DOES NOT LIGHT AND/OR FLARE COUNTER READS OTHER THAN 00 AND ALL FOI'S REMAIN RED.	Check DCP.	Replace DCP.	
11. ARM LAMP DOES NOT GO OUT.	Step 1. Check DCP ARM lamp wiring.	Replace DCP.	
	Step 2. Check ARM-SAFE switch.	Replace DCP.	
12. ONE OR MORE FOI'S	Step 1. Check EM.	Replace EM.	
REMAIN RED AND/OR FLARE COUNTER READS OTHER THAN 26.	Step 2. Check FLARE counter.	Replace DCP.	
13. SOME FOI'S CHANGE BUT DO NOT TOTAL PROGRAM COUNT.	Check EM and/or dispenser assembly.	Replace EM and/or dispenser.	
14. FOI NO. 1 REMAINS	Step 1. Check DCP.	Replace DCP.	
RED AND/OR CHAFF COUNTER READS OTHER THAN 29.	Step 2. Check EM.	Replace EM.	

Section V. AVIATION UNIT TESTING PROCEDURES

Section Contents	<u>Para</u>
Scope Setup for M91 Test Set System Test for Chaff Installation (System Daily Preflight/Rearm Test) System Test for Flare Installation (System Daily Preflight/Rearm Test)	2-8 2-9 2-10 2-11

2-8. SCOPE

- **1.** The following on-aircraft M130 general purpose dispenser system test procedures shall be conducted after replacement of any component.
- 2. Follow troubleshooting procedures (para 2-7) if any improper indications occur during the tests.

2-9. SETUP FOR M91 TEST SET

NOTE

When the M91 test set is installed on the dispenser assembly, or when the MANUAL SYSTEM RESET switch on the test set is pressed and released and 28 VDC aircraft power has been applied, the sequencer switch inside the dispenser assembly resets making a sound as it rotates. There will be no such sound if the sequencer switch has been previously reset or if the switch is in position 12 or 24.

When performing the following system test procedures using the M91 test set, the STRAY VOLTAGE lamp will light if any lamp is pressed when the test sequence switch is in any one of the last three positions (STRAY VOLT, SYS NOT RESET, DISP COMPL). To extinguish the light, rotate the switch counterclockwise back to the TS RESET position, then repeat test sequence.

The following figures are overall views that apply to the testing procedures in paragraphs 2-10 and 2-11.

SETUP FOR M91 TEST SET (cont)

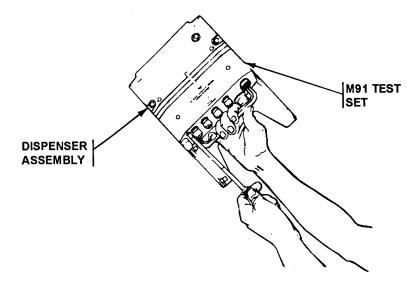


Figure 2-1. Connecting M91 Test Set to Dispenser Assembly.

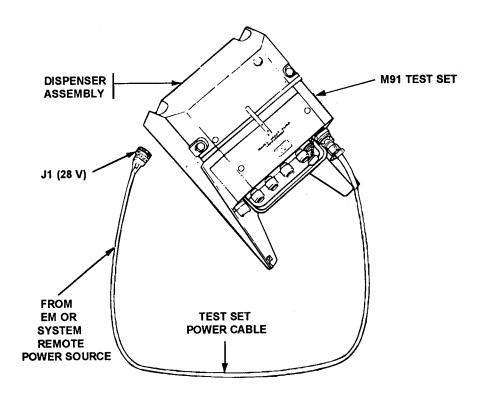


Figure 2-2. Setup with Dispenser Assembly for AVUM System Tests.

2-10. SYSTEM TEST FOR CHAFF INSTALLATION

DESCRIPTION

This task covers: System test for Chaff Installation.

INITIAL SETUP

Tools/Test and Support Equipment:
Tool Kit, Electronics, Equipment,
TK-101/G
M91 Test Set
Auxiliary Power Unit

Personnel Required: MOS 68N

Equipment Conditions:
PAYLOAD MODULE
ASSEMBLY REMOVED,
performed, para 2-32.

Aircraft safe procedures performed per applicable aircraft TM.

General Safety Instructions:

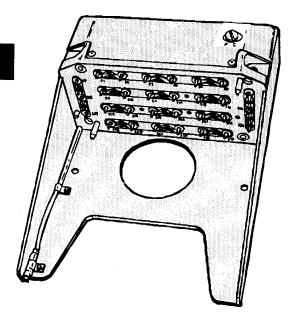
Never work on electronic equipment unless there is another person nearby who is familiar with operation and hazards of this equipment and first aid.

When aided by operator, technician must warn operator about dangerous area.

Power must not be applied to unit under test while test leads are being connected to or removed from unit assemblies/circuits under test.

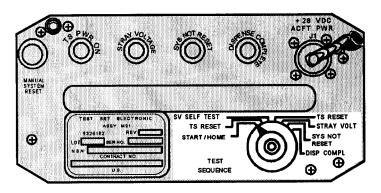
SYSTEM TEST FOR CHAFF INSTALLATION

 ON DISPENSER ASSEMBLY, ENSURE THAT C-F SELECTOR SWITCH IS IN "C" (CHAFF) POSITION.

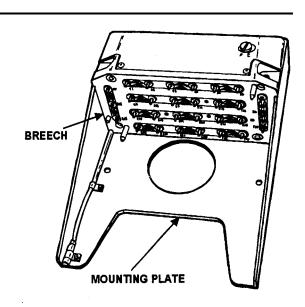


SYSTEM TEST FOR CHAFF INSTALLATION (cont.)

2. POSITION M91 TEST SET TEST SEQUENCE SWITCH TO THE START/HOME POSITION.



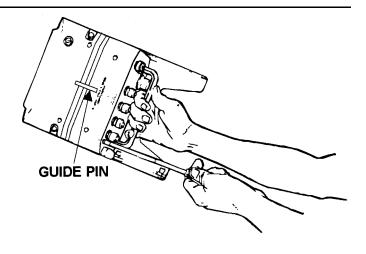
3. REMOVE DUST OR ANY FOREIGN PARTICLES FROM BREECH AND MOUNTING PLATE OF DISPENSER ASSEMBLY, USING A SOFT-HAIRED BRUSH (ITEM 2, APPX D). IF BREECH SHOWS EVIDENCE OF MOISTURE, WIPE DRY WITH A CLEAN, LINT-FREE CLOTH (ITEM 3, APPX D).



NOTE

Guide pin should be visible as illustrated.

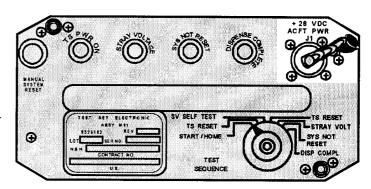
4. CONNECT M91 TEST SET TO
BREECH OF DISPENSER
ASSEMBLY, SECURE BOTH
MOUNTING STUDS. UNIFORMLY
TIGHTEN MOUNTING STUDS
USING BALL HEXAGON KEY
SCREW DRIVER PROVIDED IN M91
TEST SET CARRYING CASE.



2-10. SYSTEM TEST FOR CHAFF INSTALLATION (cont)

SYSTEM TEST FOR CHAFF INSTALLATION (cont)

CONNECT M91 TEST SET CABLE BETWEEN J1 (28 V) ON **ELECTRONICS MODULE** ASSEMBLY (EM) OR REMOTE CONNECTION ON AIRCRAFT AND +28 VDC ACFT PWR (J1) OF TEST SET.

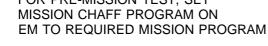


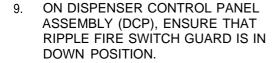
REMOVE SAFETY PIN(S) FROM SAFETY SWITCH(ES) ON EM OR REMOTE CONNECTION ON AIRCRAFT.

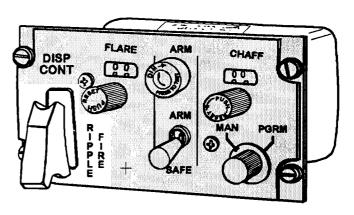
NOTE

Use step 7 or step 8 depending on test requirements.

- 7. FOR COMPLETE SYSTEM TEST, SET ALL POSSIBLE CHAFF PROGRAM COMBINATIONS ON EM.
- FOR PRE-MISSION TEST, SET MISSION CHAFF PROGRAM ON

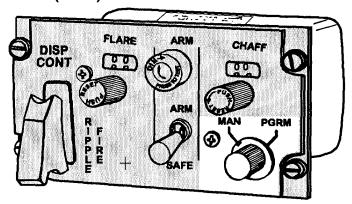




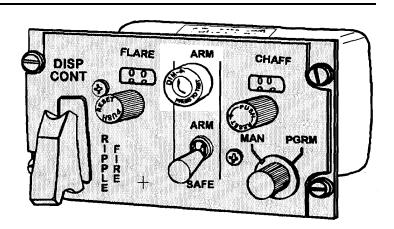


SYSTEM TEST FOR CHAFF INSTALLATION (cont.)

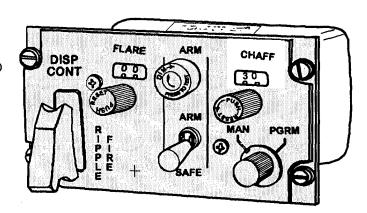
10. PROVIDE AIRCRAFT POWER TO DCP BY SETTING M130 MAIN POWER BREAKER TO ON POSITION.



11. ON DCP, PRESS ARM LAMP. ARM LAMP LIGHTS. RELEASE ARM LAMP. LIGHT GOES OUT.



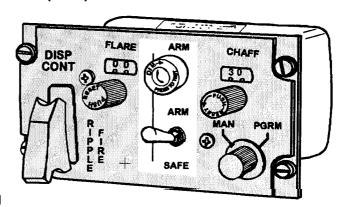
12. ON DCP, SET CHAFF COUNTER TO 30



2-10. SYSTEM TEST FOR CHAFF INSTALLATION (cont)

SYSTEM TEST FOR CHAFF INSTALLATION (cont)

- 13. PERFORM THE THE FOLLOWING OPERATIONS:
 - a. Install the Remove Before Flight Safety pin (Arm/Lamp on DCP should go out).
 - b. Remove the Remove Before Flight Safety pin from EM (Arm lamp should light).
 - c. ON DCP, SET ARM-SAFE SWITCH TO ARM. ARM LAMP LIGHTS.



WARNING

If ARM Lamp does not go out after safety pin is installed, the pin switch is not operating properly. DO NOT attempt to load the payload module assembly into the dispenser assembly, until the malfunction is corrected.

NOTE

On test set TS PWR ON lamp (clear) lights and remains on throughout the test sequence until aircraft power to test set (via test set power cable) is disconnected or shut off.

- 14. ON THE M91 TEST SET, PERFORM THE FOLLOWING OPERATIONS:
 - a. Press-to-test remaining three lamps on test set. Each lamp lights, when depressed.
 - b. Rotate TEST SEQUENCE switch clockwise to TS RESET position.

 No visual indication will occur. (If visual indication does occur, refer to malfunction 10 in table 2-2.)

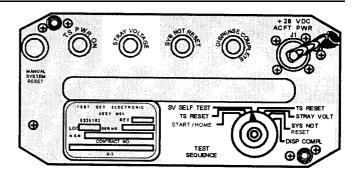
#ANDAL
STSTEE

#ANDAL
STSTEE

#ESET

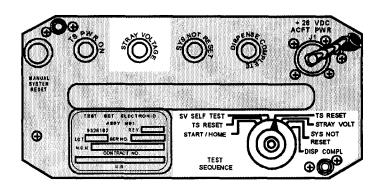
| AST SET LICETORIC | SV SELF TEST | TS RESET | STRAY VOLT | SYS NOT | RESET | STRAY VOLT | SYS NOT | SYS NOT | STRAY VOLT | STRAY VOLT | STRAY VOLT | SYS NOT | STRAY VOLT | STRAY VOLT

 Rotate TEST SEQUENCE switch clockwise to SV SELF TEST position. STRAY VOLTAGE lamp (Red) lights. (If lamp doesn't light, refer to malfunction 11 in table 2-2)

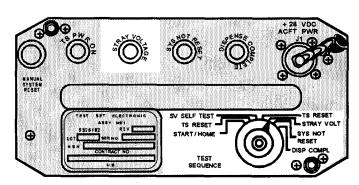


SYSTEM TEST FOR CHAFF INSTALLATION (cont.)

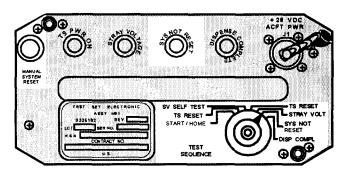
d. Rotate TEST SEQUENCE switch clockwise to TS RESET position. STRAY VOLTAGE lamp (Red) goes out. (If lamp doesn't goes out, refer to malfunction 10 in table 2-2.)



e. Rotate TEST SEQUENCE switch clockwise to STRAY VOLT position. STRAY VOLTAGE lamp (Red) should not light. (If lamp lights, refer to malfunction 10 in table 2-2.)



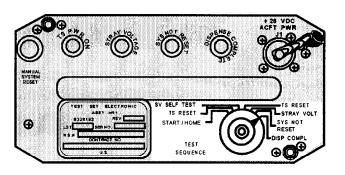
f. Rotate TEST SEQUENCE switch clockwise to SYS NOT RESET position. SYS NOT RESET lamp should not light (Amber). If lamp lights, press and release MANUAL SYSTEM RESET switch and SYS NOT RESET lamp should then go out. (If lamp still lights, refer to malfunction 12 in table 2-2.)



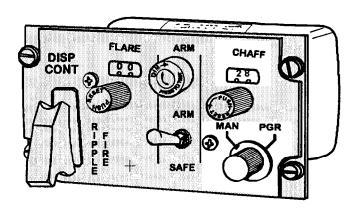
2-10. SYSTEM TEST FOR CHAFF INSTALLATION (cont)

SYSTEM TEST FOR CHAFF INSTALLATION (cont)

- 14. 0N THE M91 TEST SET,
 PERFORM THE FOLLOWING
 OPERATIONS: (cent)
 - g. Rotate TEST SEQUENCE switch clockwise to DISP COMPL position.



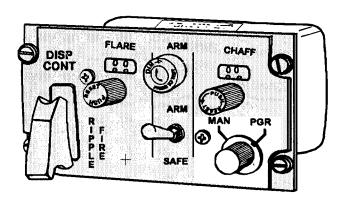
- 15. ON DCP, SET MAN-PGRM SWITCH TO THE MAN POSITION.
- 16. PRESS PILOT'S CHAFF DISP SWITCH ONCE.
- 17. PERFORM SAME TEST ON ALL ADDITIONAL SWITCHES.



NOTE

On DCP, for each depressing, the chaff counter should count down by an increment of one.

18. ON DCP, SET MAN-PGRM SWITCH TO PGRM POSITION.

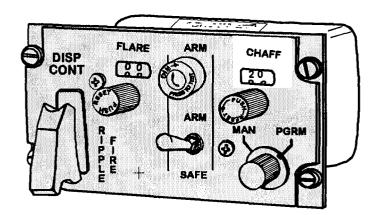


SYSTEM TEST FOR CHAFF INSTALLATION (cont.)

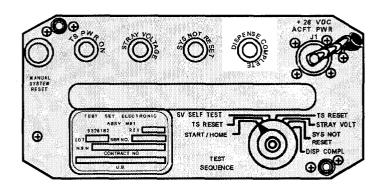
- 19. PRESS PILOT'S CHAFF DISP SWITCHES IN AIRCRAFT.
- 20. PERFORM SAME TEST ON ALL ADDITIONAL SWITCHES.

NOTE

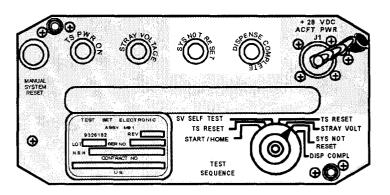
On DCP, the number shown on chaff counter should decrease in number in accordance with the program set on the EM.



- 21. CONTINUE TO PRESS ANY OTHER CHAFF DISPENSER SWITCH ON AIRCRAFT UNTIL CHAFF COUNTER ON DCP COUNTS DOWN TO 00.
- 22. ON TEST SET, THE DISPENSE COMPLETE LAMP (Green) IS LIT.



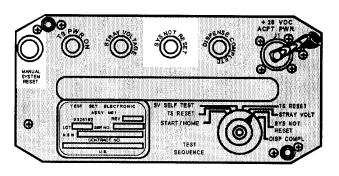
- 23. PERFORM THE FOLLOWING OPERATIONS ON THE M91 TEST SET:
 - a. Rotate TEST SEQUENCE switch counterclockwise (turn back) to SYS NOT RESET position. SYS NOT RESET lamp lights (Amber).
 (DISPENSE COMPLETE lamp (Green) remains lit).



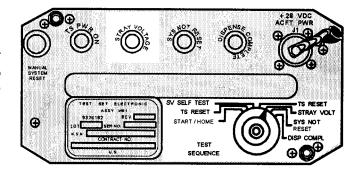
2-10. SYSTEM TEST FOR CHAFF INSTALLATION (cont)

SYSTEM TEST FOR CHAFF INSTALLATION (cont)

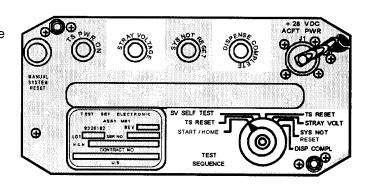
- 24. PERFORM THE FOLLOWING OPERATIONS ON THE M91 TEST SET: (cont)
 - Press and release MANUAL SYSTEM RESET switch. SYS NOT RESET lamp (Amber) goes out. (If lamp remains lit, refer to malfunction 12 in table 2-2.)



c. Rotate TEST SEQUENCE switch counterclockwise to STRAY VOLT position. STRAY VOLTAGE lamp (Red) should not light. (If lamp lights, refer to malfunction 10 in table 2-2.)



d. Rotate TEST SEQUENCE switch to the START/HOME position, the DISPENSE COMPLETE lamp goes out, the STRAY VOLTAGE lamp lights and then goes out when passing through to START/HOME position.



NOTE

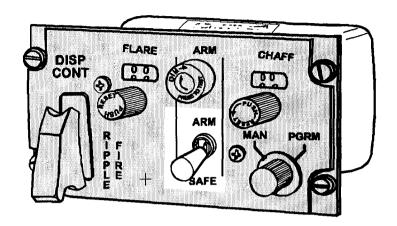
Continue to perform system test (steps 9-24) until all possible settings have been completed.

SYSTEM TEST FOR CHAFF INSTALLATION (cont.)

CAUTION

ENSURE CHAFF MAN/PGRM SWITCH IS SET TO MAN.

1. ON DCP, SET ARM-SAFE SWITCH TO SAFE POSITION.



- 2. DISCONNECT AIRCRAFT POWER BY SETTING M130 MAIN POWER BREAKER TO OFF POSITION.
- REINSTALL SAFETY PIN(S) IN SAFETY SWITCH(ES) ON EM OR REMOTE CONNECTION ON AIRCRAFT.
- 4. DISCONNECT TEST SET POWER CABLE.
- 5. DISCONNECT AND REMOVE M91
 TEST SET FROM DISPENSER
 ASSEMBLY AND REINSTALL IN
 CARRYING CASE ALONG WITH
 POWER CABLE AND BALL
 HEXAGONAL KEY
 SCREWDRIVER.

CAUTION

Aircraft equipped with more than one dispenser assembly must have all dispenser assemblies tested prior to loading any payload modules.

PROCEED TO CHAFF LOADING PROCEDURES.

2-11. SYSTEM TEST FOR FLARE INSTALLATION

DESCRIPTION

This task covers: System test for flare installation.

INITIAL SÉTUP

Tools/Test and Support Equipment:
Tool kit, Electronic, Equipment,
TK-101/G
M91 Test Set
Auxiliary Power Unit

Personnel Required MOS 68N

Equipment Conditions:
PAYLOAD MODULE
ASSEMBLY REMOVED.
Performed, para 2-32.

Aircraft safe procedures performed per applicable aircraft TM.

General Safety Instructions: Never work on electronic equipment unless there is another person nearby who is familiar with operation and hazards of this equipment and first aid. When aided by operator, technician must warn operator about dangerous area.

Power must not be applied to unit under test while test leads are being connected to or removed from unit assemblies/circuits under test.

SYSTEM TEST FOR FLARE INSTALLATION

WARNING

For aircraft with AN/ALQ-156(V) countermeasures set installed: do not stand within 3 feet (0.915 meters) of the transmit antenna when the AN/ALQ-156(V) equipment is on. High frequency electromagnetic radiation can cause internal burns without causing any sensation of heat. If you feel the slightest warming effect while near the transmit antenna, move away quickly.

NOTE

For aircraft without AN/ALQ-156(V) countermeasures set, go to step 2.

- FOR AIRCRAFT WITH AN/ALQ-156(V) COUNTERMEASURES SET INSTALLED, PERFORM THE FOLLOWING OPERATIONS:
 - a. On control indicator, ensure that TEST/FLARE switch guard and POWER ON/OFF switch are in the down position (FLARE and OFF positions respectively).
 - b. Provide aircraft power to the AN/ALQ-156(V) countermeasures set.

SYSTEM TEST FOR FLARE INSTALLATION (cont)

NOTE

The actual time that the STATUS WRMUP lamp remains lit is a function of equipment and environmental temperature. If the equipment has been off for a short period of time and the environmental temperature is near 131 °F (+55 °C), the STATUS WARM-UP lamp may go out in as little as 15 seconds. At the opposite extreme, equipment has not been on for a long period of time and the environmental temperature is near -22 °F (-30 °C), the STATUS WRMUP lamp may remain lit for up to 30 minutes. However, under nominal conditions +77 °F (+25 °C), the STATUS WRMUP lamp will go out in approximately 8 to 10 minutes. If further information about AN/ALQ-156(V) countermeasures set is required, see TM 11-5865-263-12, operator's and aviation unit maintenance manual.

c. On the control indicator, set POWER ON/OFF switch to ON position, WRMUP lamp lights.

NOTE

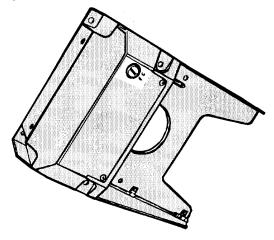
STBY lamp maybe lighted.

- d. When the WRMUP lamp goes off and if STBY lamp previously was not lighted, press the PUSH FOR STANDBY switch, STBY lamp lights.
- e. Press the PUSH FOR STANDBY switch which will cause the STBY lamp to go out, indicating that the system is in the ON mode (antenna is transmitting).
- f. Press the PUSH FOR STANDBY switch again, STBY lamp lights.

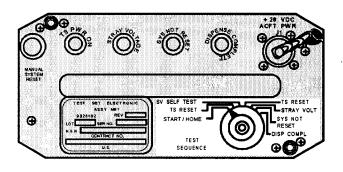
2-11. SYSTEM TEST FOR FLARE INSTALLATION (cont)

SYSTEM TEST FOR FLARE INSTALLATION (cont)

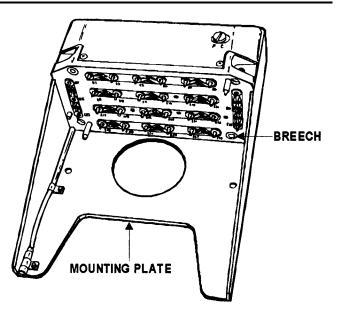
2. ON DISPENSER ASSEMBLY, ENSURE THAT C-F SELECTOR SWITCH IS IN "F" (FLARE) POSITION.



3. POSITION M91 TEST SET TEST SEQUENCE SWITCH TO THE START/HOME POSITION.



4. REMOVE DUST OR ANY FOREIGN PARTICLES FROM BREECH AND MOUNTING PLATE OF DISPENSER ASSEMBLY, USING A SOFT-HAIRED BRUSH (ITEM 2, APPX D). IF BREECH SHOWS EVIDENCE OF MOISTURE, WIPE DRY WITH A CLEAN, LINT-FREE CLOTH (ITEM 3, APPX D).

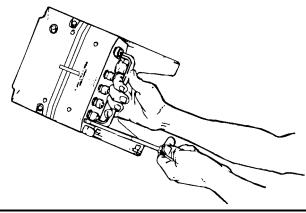


SYSTEM TEST FOR FLARE INSTALLATION (cont)

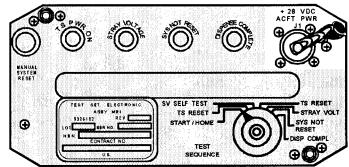
NOTE

Guide pin should be visible as illustrated.

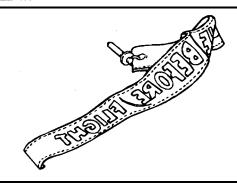
 CONNECT M91 TEST SET TO BREECH OF DISPENSER ASSEMBLY. SECURE BOTH MOUNTING STUDS. UNIFORMLYTIGHTEN USINGBALLHEXAGON SCREWDRIVER PROVIDED IN M91 TEST SET CARRYING CASE.



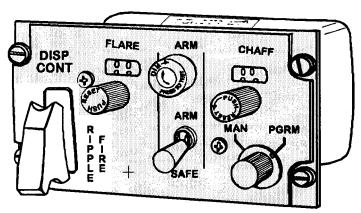
6. CONNECT M91 TEST SETCABLE
BETWEEN Ji (28V) ON
ELECTRONICS MODULE
ASSEMBLY (EM) OR REMOTE
CONNECTION ON AIRCRAFT AND
+ 28 VDC ACFT PWR (J1) OF TEST
SET.



- 7. REMOVE SAFETY PIN(S) FROM SAFETY SWITCH(ES) ON EM OR EXTERIOR CONNECTION ON AIRCRAFT.
- 8. SET M130 POWER-BY-PASS SWITCH (IF ONE IS PRESENT IN AIRCRAFT) TO BYPASS POSITION.



 ON DISPENSER CONTROL PANEL ASSEMBLY (DCP), ENSURE THAT RIPPLE FIRE SWITCH GUARD IS IN DOWN POSITION.

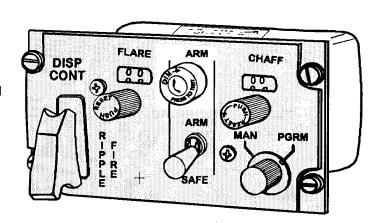


2-11. SYSTEM TEST FOR FLARE INSTALLATION (cont)

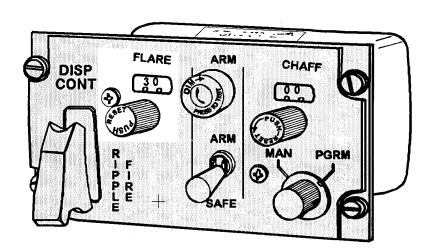
SYSTEM TEST FOR FLARE INSTALLATION (cont)

10. PROVIDE AIRCRAFT POWER TO DCP BY SETTING M130 MAIN POWER BREAKER TO ON POSITION.

11. ON DCP, PRESS ARM LAMP. ARM LAMP LIGHTS. RELEASE ARM LAMP. LIGHT GOES OUT.

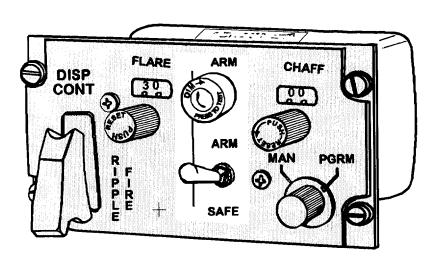


12. ON DCP, SET FLARE COUNTER TO 30.



SYSTEM TEST FOR FLARE INSTALLATION (cont)

13. ON DCP, SET ARM-SAFE SWITCH TO ARM. THE ARM LAMP LIGHTS.

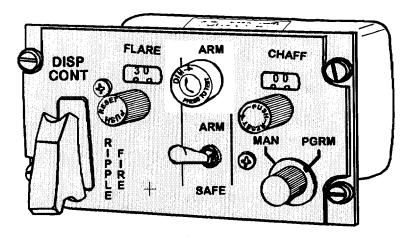


- 14. PERFORM THE FOLLOWING TEST OF THE SYSTEM SAFETY PIN SWITCH:
 - Reinstall system safety pin. ARM lamp on the DCP should go out.

WARNING

If ARM lamp does not go out after safety pin is installed, DO NOT attempt to load the payload module assembly into the dispenser assembly.

b. Remove safety pin from EM. ARM lamp should light.



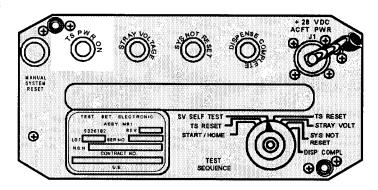
2-11. SYSTEM TEST FOR FLARE INSTALLATION (cont)

SYSTEM TEST FOR FLARE INSTALLATION (cont)

NOTE

On M91 test set, TS PWR ON lamp lights and remains on throughout the test sequence until aircraft power to test set (via test set power cable) is disconnected or shut off. (If lamps light with PWR ON switched off, refer to malfunction 9 table 2-2.)

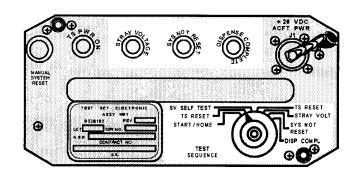
When a safety pin has been removed from either side of the aircraft and aircraft power has been supplied to the DCP, the ARM lamp will light and both counters will operate and the test set will be operational. However, there will be no power to the dispenser with the safety pin installed and the test set will not function.



NOTE

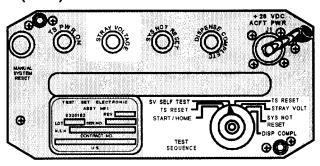
On test set TS PWR ON lamp lights (clear) and remains on throughout the test sequence until aircraft power to test set (via test set power cable) is disconnected or shut off.

- 15. ON THE M91 TEST SET, PERFORM THE FOLLOWING OPERATIONS:
 - a. Press-to-test remaining three lamps on test set. Each lamp lights when depressed.
 - Rotate TEST SEQUENCE switch clockwise to TS RESET position.
 No visual indication will occur. (If visual indication does occur, refer to malfunction 10 in table 2-2.)

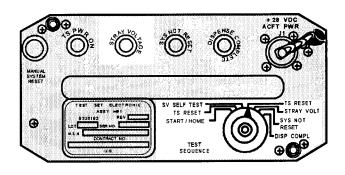


SYSTEM TEST FOR FLARE ISTALLATION (cont)

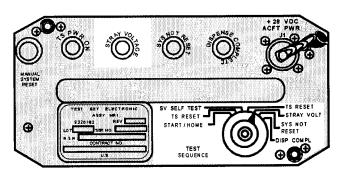
c. Rotate TEST SEQUENCE switch clockwise to SV SELF TEST position. STRAY VOLTAGE lamp (Red) lights. (If lamp doesn't light, refer to malfunction 11 in table 2-2.)



d. Rotate TEST SEQUENCE switch clockwise to TS RESET position. STRAY VOLTAGE lamp (Red) goes out. (If lamp doesn't go out, refer to malfunction 10 in table 2-2.)



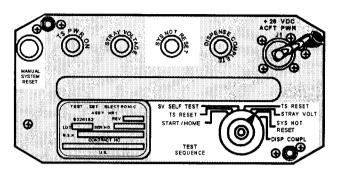
e. Rotate TEST SEQUENCE switch clockwise to STRAY VOLT position. STRAY VOLTAGE lamp (Red) should not light. (If lamp lights, refer to malfunction 10 in table 2-2.)



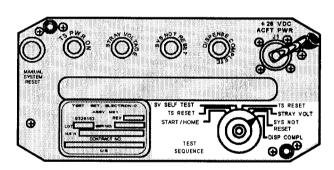
2-11. SYSTEM TEST FOR FLARE INSTALLATION (cont)

SYSTEM TEST FOR FLARE INSTALLATION (cont)

- 15. ON THE M91 TEST SET,
 PERFORM THE FOLLOWING
 OPERATIONS: (cont)
 - f. Rotate TEST SEQUENCE switch clockwise to SYS NOT RESET position. SYS NOT RESET lamp (Amber) should not light. If lamp lights, press and release MANUAL SYSTEM RESET switch and SYS NOT RESET lamp should then go out. (If lamp still lights, refer to malfunction 12 in table 2-2.)



g. Rotate TEST SEQUENCE switch clockwise to DISP COMPL position.



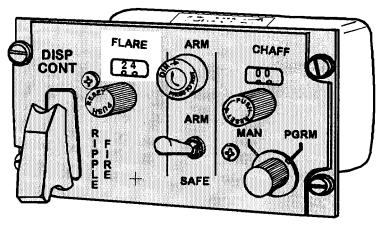
SYSTEM TEST FOR FLARE INSTALLATION (cont)

- 16. PRESS PILOT'S FLARE DISP SWITCH ONCE, PRESS COPILOT'S FLARE DISP SWITCH ONCE. ON DCP, FOR EACH DEPRESSING, THE FLARE COUNTER SHOULD COUNT DOWN IN GROUPS OF THREE (17,24, ETC.).
- 17. PRESS EACH OF THE REMOTE FLARE HAND SWITCH BUTTONS ONCE THROUGHOUT THE AIRCRAFT, IF APPLICABLE, TO ENSURE EACH REMOTE FLARE HAND SWITCH IS OPERABLE. FOR EACH DEPRESSING, THE FLARE COUNTER ON DCP CHANGES IN GROUPS OF THREE.

NOTE

Hold down switch long enough for the FLARE counter to count down at least two groups of three (on aircraft where this is applicable). Ensure that the time interval between each group of three counts is not less than 2 seconds or longer than 3 seconds.

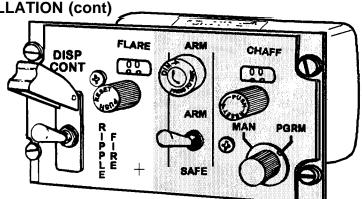
18. ON THE AN/ALQ-156(V)
CONTROL INDICATOR (IF ONE
IS PRESENT IN AIRCRAFT),
RAISE TEST/FLARE SWITCH
GUARD TO UP POSITION. SET
TEST/FLARE SWITCH
MOMENTARILY (APPROX. 1
SECOND) TO THE UP
POSITION (TEST). FLARE
COUNTER ON DCP CHANGES
IN GROUPS OF THREE FOR
EACH UP POSITION. (If not,
refer to malfunction 13 in
table 2-2.)

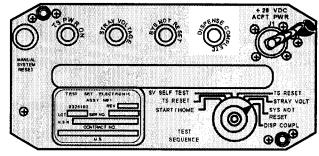


2-11. SYSTEM TEST FOR FLARE INSTALLATION (cont)

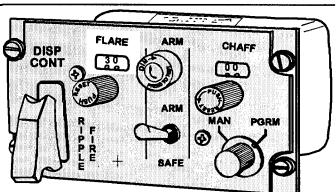
SYSTEM TEST FOR FLARE INSTALLATION (cont)

19. ON DCP, RAISE RIPPLE FIRE SWITCH GUARD AND PLACE TOGGLE SWITCH TO THE UP POSITION UNTIL FLARE COUNTER COUNTS DOWN TO 00, THEN PLACE THE SWITCH GUARD IN THE DOWN POSITION. DISPENSE COMPLETE LAMP (GREEN) ON M91 TEST SET, LIGHTS.

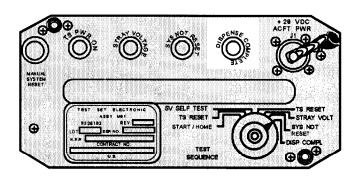




20. ON THE AN/ALQ-156(V) CONTROL INDICATOR (IF ONE IS PRESENT IN THE AIRCRAFT), SET POWER ON/OFF SWITCH TO THE OFF POSITION. ALSO, ENSURE TEST/FLARE SWITCH GUARD IS IN DOWN POSITION.

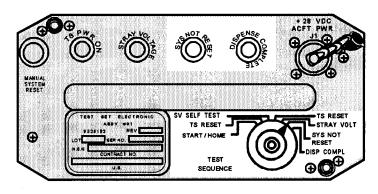


21. ON DCP, RESET FLARE COUNTER TO 30. DISPENSE COMPLETE LAMP ON TEST SET REMAIN LIT. (If lamp doesn't light, refer to malfunction 14 in table 2-2.)

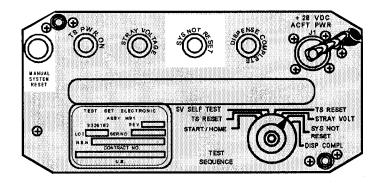


SYSTEM TEST FOR FLARE INSTALLATION (cont)

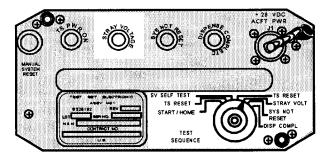
- 22. PERFORM THE FOLLOWING OPERATIONS ON THE M91 TEST SET:
 - a. Rotate TEST SEQUENCE switch counterclockwise (turn back) to SYS NOT RESET position. SYS NOT RESET lamp (Amber) lights.
 (DISPENSE COMPLETE lamp (Green) remains lit).



 Press and release MANUAL SYSTEM RESET switch. SYS NOT RESET lamp (Amber) goes out. (If lamp remains lit, refer to malfunction 11 in table 2-2.)



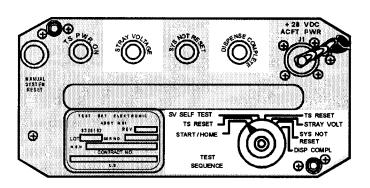
c. Rotate TEST SEQUENCE switch counterclockwise to STRAY VOLT position. STRAY VOLTAGE lamp (Red) should not light. (If lamp lights, refer to malfunction 10 in table 2-2.)



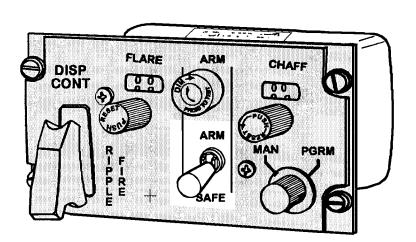
2-11. SYSTEM TEST FOR FLARE INSTALLATION (cont)

SYSTEM TEST FOR FLARE INSTALLATION (cont)

- 22. PERFORM THE FOLLOWING OPERATIONS ON THE M91 TEST SET: (cont)
 - d. Rotate TEST SEQUENCE switch to the START/HOME position, the DISPENSE COMPLETE lamp goes out, the STRAY VOLTAGE lamp lights and then goes out when passing through to START/HOME position.



23. ON DCP, SET ARM-SAFE SWITCH TO SAFE POSITION.



- 24. DISCONNECT AIRCRAFT POWER BY SETTING M130 MAIN POWER BREAKER TO OFF POSITION.
- 25. REINSTALL SAFETY PIN(S) IN SAFETY SWITCH(ES) ON EM OR REMOTE CONNECTION ON AIRCRAFT.
- 26. DISCONNECT TEST SET POWER CABLE.
- 27. DISCONNECT AND REMOVE M91 TEST SET FROM DISPENSER ASSEMBLY AND REINSTALL IN CARRYING CASE ALONG WITH POWER CABLE AND BALL HEXAGONAL KEY SCREWDRIVER.

28. SET M130 POWER-BY-PASS SWITCH
(IF ONE IS PRESENT IN AIRCRAFT) TO
NORMAL POSITION.

CAUTION

Aircraft equipped with more than one dispenser assembly must have all dispenser assemblies tested prior to loading any payload modules.

29. PROCEED TO FLARE LOADING PROCEDURES.

END OF TASK

Section VI. MAINTENANCE OF PAYLOAD MODULE ASSEMBLY

Section Contents	<u>Para</u>
Replacement of Payload Module Assembly	2-12
Repair of Retaining Plate	2-13
Repair of Payload Module Assembly	2-14



2-12. REPLACEMENT OF PAYLOAD MODULE ASSEMBLY

DESCRIPTION

This task covers: Removal/installation of the payload module assembly.

INITIAL SETUP

Personnel Required: MOS 68N

REMOVAL/INSTALLATION

REFER TO APPLICABLE AIRCRAFT TM.

END OF TASK

2-13. REPAIR OF RETAINING PLATE

DESCRIPTION

This task covers: Repair of the retaining plate.

INITIAL SETUP

Tools/Test and Support Equipment:
Tool Kit, Electronics, Equpment,
TK-101/G

Materials:

Sealing Compound (item 8, Appx D)

Personnel Required: MOS 68N

Equipment Conditions
Payload Module assembly removed

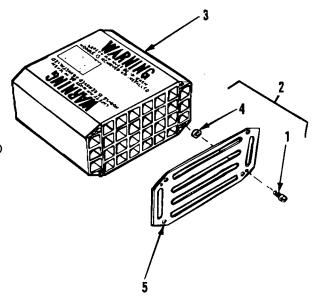
REPAIR OF RETAINING PLATE

- LOOSEN TWO SCREWS (1) AND REMOVE RETAINING PLATE (2) FROM PAYLOAD MODULE (3).
- 2. REMOVE TWO ROUND NUTS (4) AND SCREWS (1) FROM PLATE (5).
- 3. INSPECT PLATE FOR DISTORTION AND ELONGATED HOLES. CHECK FOR BROKEN, DAMAGED, OR MISSING PARTS.
- REPAIR IS BY REPLACEMENT OF AUTHORIZED PARTS (APPX C) WHICH DO NOT MEET THE INSPECTION CRITERIA.
- 5. INSTALL TWO SCREWS (1) ON PLATE (5).
- APPLY SEALING COMPOUND (ITEM 8, APPX D) ON SCREW THREADS WHERE ROUND NUTS WILL BE POSITIONED.
- 7. INSTALL TWO ROUND NUTS (4).

NOTE

Insure retaining plate is centered over guide pin holes.

 INSTALL SERVICEABLE RETAINING PLATE (2) TO PAYLOAD MODULE (3). SECURE TWO SCREWS (1),



END OF TASK

2-14. REPAIR OF PAYLOAD MODULE ASSEMBLY

DESCRIPTION

This task covers: Disassembly, Inspection/repair, and assembly.

INITIAL SETUP

Tools/Test and Support Equipment:
Tool Kit, Electronics, Equipment,
TK-101/G

Materials/Parts: Retaining Ring (2) (MS16632-1025) Personnel Required: MOS 68N

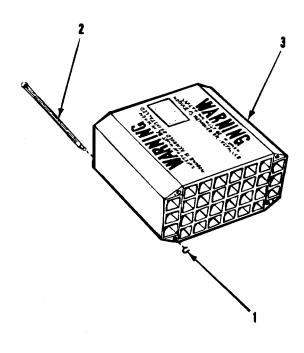
Equipment Conditions
UNLOADING PROCEDURES
performed, para 2-32.

DISASSEMBLY

REMOVE TWO RETAINING RINGS (1) AND TWO STUDS NUTS (2). DISCARD RETAINING RINGS (1).

INSPECTION/REPAIR

- INSPECTION STUD NUTS (2) FOR DISTORTION AND STRIPPED OR DAMAGED THREADS.
- 2. INSPECT PAYLOAD MODULE (3) FOR DISTORTION, CRACKS, AND STRUCTURAL DAMAGE.
- 3. REPAIR IS BY REPLACEMENT OF AUTHORIZED PARTS (APPX C) WHICH DO NOT MEET THE INSPECTION CRITERIA.

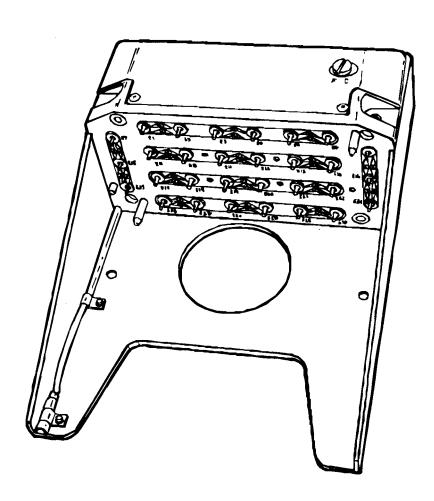


ASSEMBLY

INSTALL TWO STUD NUTS (2) AND TWO NEW RETAINING RINGS (1).

Section VII. MAINTENANCE OF DISPENSER ASSEMBLY

Section Contents	<u>Para</u>
Replacement of Dispenser Assembly	2-15
Repair of Breech	2-16



2-15. REPLACEMENT OF DISPENSER ASSEMBLY

DESCRIPTION

This task covers: Removal/installation of the dispenser assembly.

INITIAL SETUP

Personnel Required: MOS 68N

REMOVAL/INSTALLATION

REFER TO APPLICABLE AIRCRAFT TM.

END OF TASK

2-16. REPAIR OF BREECH

DESCRIPTION

This task covers: Disassembly, inspection/repair, and assembly.

INITIAL SETUP

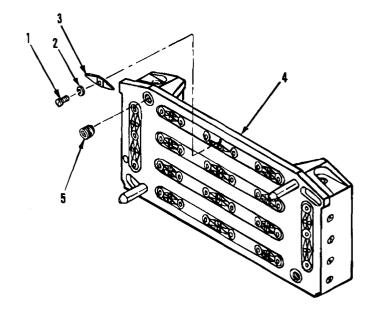
Tools/Test and Support Equipment:
Tool Kit, Electronics, Equipment,
TK-101/G

Personnel Required: MOS 68N

DISASSEMBLY

- REMOVE THIRTY-TWO SCREWS

 (1), LOCKWASHERS (2), AND
 FLAT SPRINGS (3) FROM
 BREECH PLATE (4).
- 2. IF REPLACEMENT OF RECEPTACLE INSERTS (5) IS NECESSARY, THEN RETURN TO AVIM.



2-15. REPAIR OF BREECH (cont)

REPAIR OF BREECH (cont)

INSPECTION/REPAIR

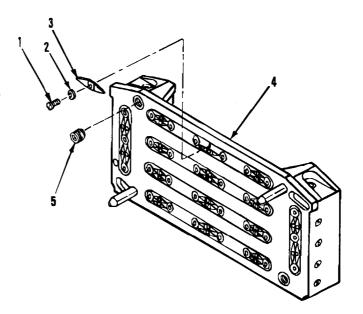
- 1. INSPECT FOR BROKEN, CRACKED, OR DEFORMED FLAT SPRINGS.
- 2. INSPECT BREECH PLATE FOR CRACKS OR DISTORTION.
- 3. INSPECT IF HARDWARE IS MISSING, DAMAGED, OR BROKEN.
- 4. REPAIR BY REPLACEMENT OF AUTHORIZED PARTS (APPX C) WHICH DO NOT MEET THE INSPECTION CRITERIA.

ASSEMBLY

NOTE

Before tightening screws, ensure that the minimum height from top of breech plate to top of flat spring is 0.095 in. (0.24 cm).

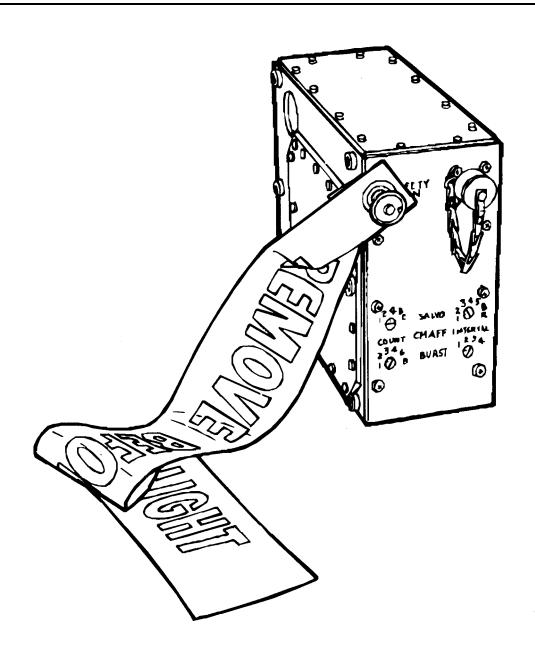
INSTALL THIRTY-TWO FLAT SPRINGS (3), LOCKWASHERS (2), AND SCREWS (1).



END OF TASK

Section VIII. MAINTENANCE OF ELECTRONICS MODULE ASSEMBLY

Section Contents	<u>Para</u>
Replacement of Electronics Module Assembly Replacement of Safety Pin	2-17 2-18



2-17. REPLACEMENT OF ELECTRONICS MODULE ASSEMBLY

DESCRIPTION

This task covers: Removal/installation of the electronics module assembly.

INITIAL SETUP

Personnel Required: MOS 68N

REMOVAL/INSTALLATION

REFER TO APPLICABLE AIRCRAFT TM.

END OF TASK

2-18. REPLACEMENT OF SAFETY PIN

DESCRIPTION

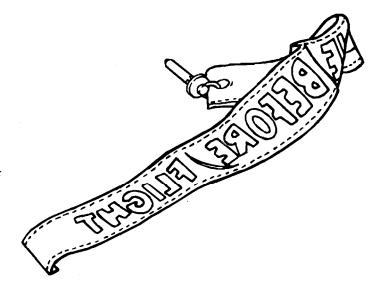
This task covers: Replacement of the electronics module assembly safety pin.

INITIAL SETUP

Personnel Required: MOS 68N

REPAIR

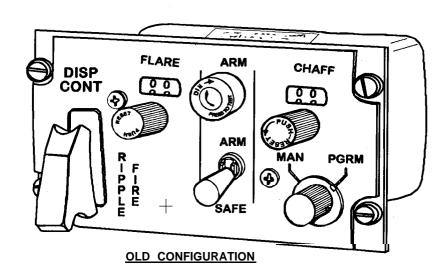
- 1. REMOVE "REMOVE BEFORE FLIGHT" SAFETY PIN.
- INSPECT FOR BENT OR DAMAGED SYSTEM "REMOVE BEFORE FLIGHT SAFETY PIN AND FOR FRAYED OR TORN FLAG.
- 3. REPAIR IS BY REPLACEMENT OF AUTHORIZED PARTS (APPX C) WHICH DO NOT MEET THE INSPECTION CRITERIA.
- **4.** INSTALL SERVICEABLE SYSTEM "REMOVE BEFORE FLIGHT" SAFETY PIN.

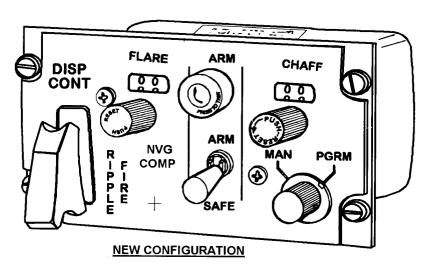


END OF TASK

Section IX. MAINTENANCE OF DISPENSER CONTROL PANEL ASSEMBLY

Section Contents	<u>Para</u>
Replacement of Dispenser Control Panel Assembly	2-19
Repair of Dispenser Control Panel Assembly (Knob and Lamp)	2-20
Repair of Front and Rear Panel Assembly (Fuse)	2-21
Repair of Ripple Fire Switch Cover	2-22





2-19. REPLACEMENT OF DISPENSER CONTROL PANEL ASSEMBLY

DESCRIPTION

This task covers: Removal/installation of the dispenser control panel assembly.

INITIAL SETUP

Personnel Required: MOS 68N

REMOVAL/INSTALLATION

REFER TO APPLICABLE AIRCRAFT TM.

END OF TASK

2-20. REPAIR OF DISPENSER CONTROL PANEL ASSEMBLY

DESCRIPTION

This task covers: Repair of the dispenser control panel assembly.

INITIAL SETUP

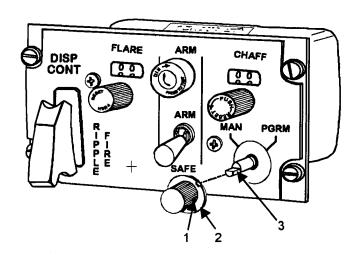
Tools/Test and Support Equipment:
Tool Kit, Electronics, Equipment,
TK-101/G
Personnel Required:
MOS 68N

Equipment Conditions:

Dispenser control panel
assembly removed

REPAIR

- LOOSEN TWO SETSCREWS (1) AND REMOVE KNOB (2) FROM ROTARY SWITCH (3).
- 2. INSPECT KNOB FOR MISSING SETSCREWS, STRIPPED THREADS, AND DAMAGE.
- 3. REPAIR IS BY REPLACEMENT OF AUTHORIZED PARTS (APPX C) WHICH DO NOT MEET THE INSPECTION CRITERIA.
- INSTALL SERVICEABLE KNOB (2) ON ROTARY SWITCH (3) AND SECURE BY TIGHTENING TWO SETSCREWS (1).



END OF TASK

2-21. REPAIR OF FRONT AND REAR PANEL ASSEMBLY

DESCRIPTION

This task covers: Repair of the front and rear panel assembly.

INITIAL SETUP

Tools/Test and Support Equipment:
Tool Kit, Electronics, Equipment,
TK-101/G

Personnel Required: MOS 68N

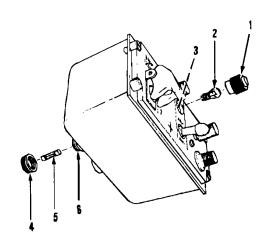
Parts:

Fuse (F02B32Y15A) Lamp (MS25237-327)

REPAIR

- UNSCREW INDICATOR LIGHT LENS

 (1) AND REMOVE LAMP (2) FROM
 INDICATOR LIGHT (3). INSPECT
 LAMP FOR CORROSION, BREAKS,
 AND DAMAGE.
- 2. UNSCREW FUSEHOLDER CAP (4) AND REMOVE FUSE (5) FROM FUSEHOLDER (6).
- 3. INSPECT FUSE FOR BROKEN ELEMENT AND DAMAGE.
- REPAIR IS BY REPLACEMENT OF AUTHORIZED PARTS (APPX C) WHICH DO NOT MEET THE INSPECTION CRITERIA.
- 5. INSTALL NEW FUSE (5) AND FUSEHOLDER CAP (4) ON FUSEHOLDER (6).
- INSTALL NEW LAMP (2) AND INDICATOR LIGHT LENS (1) ON INDICATOR LIGHT (3).



2-22. REPAIR OF RIPPLE FIRE SWITCH COVER

DESCRIPTION

This task covers: Repair of the ripple fire switch cover.

INITIAL SETUP

Tools/Test and Support Equipment: Tool Kit, Electronics, Equipment, TK-101/G

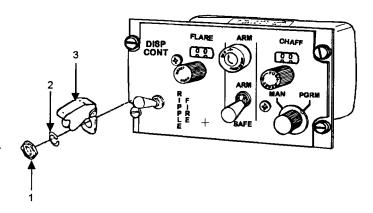
Parts:

Guard, switch two-position (MS25224-1)
Cover, access (9321318)

Personnel Required: MOS 68N

REPAIR

- REMOVE NUT (1) LOCKWASHER
 (2) AND GUARD (3).
- 2. INSPECT SWITCH GUARD FOR WEAK SPRING ACTION AND CRACKS.
- 3. REPAIR IS BY REPLACEMENT OF AUTHORIZED PARTS (APPX C) WHICH DO NOT MEET THE INSPECTION CRITERIA.
- 4. INSTALL SWITCH GUARD (3) LOCKWASHER (2), AND NUT (1).



END OF TASK

Section X. AVIATION TESTING PROCEDURES (ON AIRCRAFT)

Section Contents	<u>Para</u>
Scope Setup for M92 Test Set Chaff Dispenser Assembly Electrical Test (on Aircraft) Flare Dispenser Assembly Electrical Test (on Aircraft)	2-23 2-24 2-25 2-26

2-23. SCOPE

The following test procedures shall be conducted prior to installing the components on the aircraft, except as noted.

2-24. SETUP FOR M92 TEST SET

NOTE

When the M92 test set is installed on the dispenser assembly, or when the MANUAL SYSTEM RESET switch on the dispenser test adapter assembly is pressed and released and 28 VDC aircraft power has been applied, the sequencer switch inside the dispenser assembly resets making a sound as it rotates. There will be no such sound if the sequencer switch has been previously reset or if the switch is in position 12 or 24.

The following two (2) figures show the overall setups and block diagrams for the testing procedures in paragraphs 2-25 and 2-26 which is used for on aircraft testing. Refer to applicable test procedures for detailed instructions.

2-24. SETUP FOR M92 TEST SET (cont)

SETUP FOR M92 TEST SET (cont)

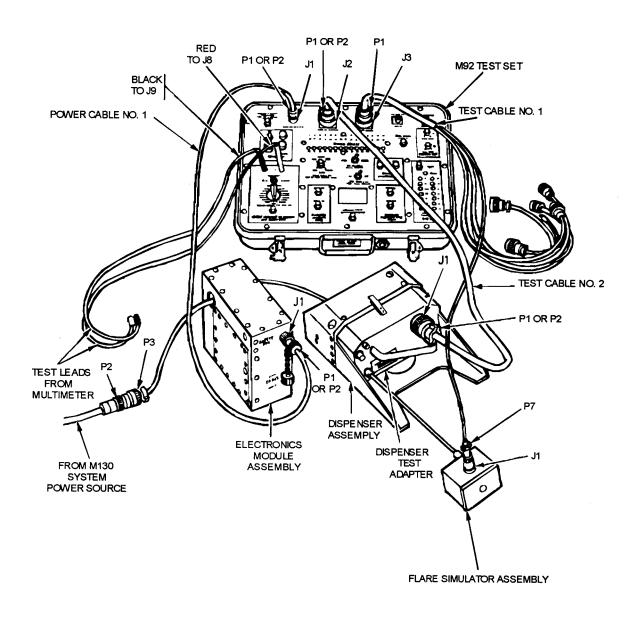


Figure 2-3. Setup for Electrical System Tests on Aircraft (All Types).

SETUP M92 TEST SET (cont)

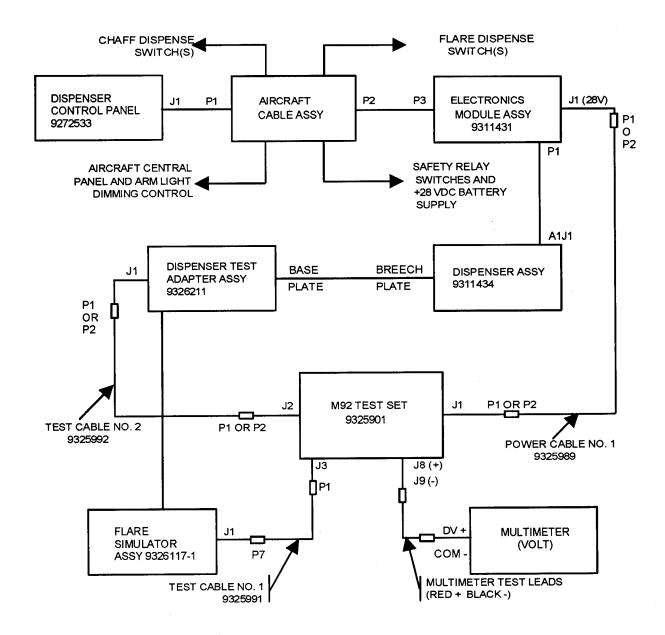


Figure 2-4. Block Diagram of Electrical System Tests on Aircraft (All Types).

2-25. CHAFF DISPENSER ASSEMBLY ELECTRICAL TEST (ON AIRCRAFT)

DESCRIPTION

This task covers: Chaff dispenser assembly electrical test (on aircraft).

INITIAL SETUP

Tools/Test and Support
Equipment:
Tool Kit, Electronic, Equipment
TK-101/G
Tool Set, Aircraft Armament
Repairman: Supplemental
M92 Test Set
Auxiliary Power Unit
Multimeter AN/PSM-45A

Personnel Required: MOS 68N

Equipment Conditions:

On aircraft.

Payload module assembly removed.

Aircraft safe procedures performed per applicable aircraft TM.

General Safety Instructions: Never work on electronic equipment unless there is another person nearby who is familiar with operation and hazards of this equipment and first aid. When aided by operator, technician must warn operator about dangerous area.

Power must not be applied to unit under test while test leads are being connected to or removed from unit assemblies/circuits under test.

NOTE

Refer to figures 2-3, 2-4, and 2-5 (para 2-24) for overall setup details

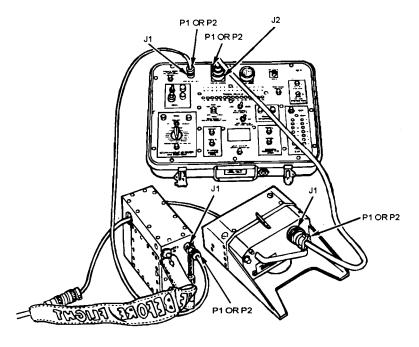
CHAFF DISPENSER ASSEMBLY ELECTRICAL TEST (ON AIRCRAFT) (cont)

- CONNECT EITHER END (P1 OR P2) OF TEST CABLE NO. 2 TO J2 ON M92 TEST SET.
- CONNECT OTHER END (P1 OR P2) OF TEST CABLE NO.
 TO J1 DISPENSER TEST ADAPTER ASSEMBLY (P/N 9326211, PROVIDED WITH M92 TEST SET).
- 3. REMOVE DUST OR ANY FOREIGN PARTICLES FROM BREECH AND MOUNTING PLATE OF DISPENSER ASSEMBLY, USING A SOFT-HAIRED BRUSH (ITEM 2, APPX D). IF BREECH SHOWS EVIDENCE OF MOISTURE, WIPE DRY WITH A CLEAN LINT-FREE CLOTH (ITEM 3, APPX D).
- 4. CONNECT DISPENSER
 TEST ADAPTER ASSEMBLY
 TO BREECH OF
 DISPENSER ASSEMBLY.
 SECURE BOTH MOUNTING
 STUDS. ENSURE C-F
 SELECTOR SWITCH IS IN C
 POSITION.

NOTE

Insure dispenser test adapter assembly is mounted securely to breech of dispenser assembly.

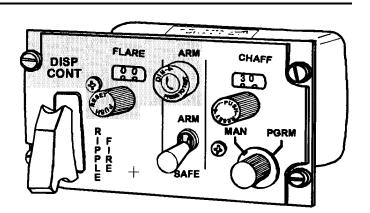
- 5. CONNECT EITHER END (P1 OR P2) OF POWER CABLE NO. 1 TO J1 OF M92 TEST SET.
- CONNECT OTHER END (P1 OR P2) OF POWER CABLE NO. 1 TO J1 (28 V) OF EM OR EXTERIOR CONNECTION ON AIRCRAFT.



2-25. CHAFF DISPENSER ASSEMBLY ELECTRICAL TEST (ON AIRCRAFT) (cont)

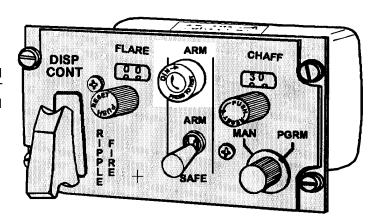
CHAFF DISPENSER ASSEMBLY ELECTRICAL TEST (ON AIRCRAFT) (cont)

- 7. SET MISSION CHAFF PROGRAM ON EM (IAW APPLICABLE AIRCRAFT MISSION REQUIREMENT SETTINGS).
- 8. REMOVE SYSTEM SAFETY PIN.
- SET M130 POWER-BY-PASS SWITCH (IF ONE IS PRESENT IN AIRCRAFT) TO BY-PASS POSITION.
- 10. ON DCP, SET MAN-PGRM SWITCH TO MAN POSITION.
- 11. ON DCP, SET ARM-SAFE SWITCH TO SAFE POSITION.
- 12. ON DCP, PLACE RIPPLE FIRE SWITCH GUARD IN DOWN POSITION.
- 13. ON DCP, SET CHAFF COUNTER TO 30.



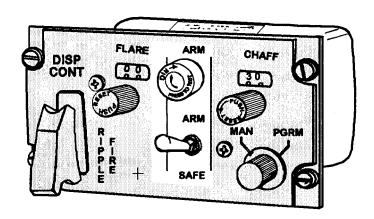
14. PROVIDE AIRCRAFT POWER TO THE DCP BY SETTING M130 MAIN POWER BREAKER TO ON POSITION.

15. ON DCP, PRESS ARM LAMP, ARM LAMP LIGHTS. (IF LAMP DOESN'T LIGHT, REFER TO MALFUNCTION 2 IN TABLE 2-3). RELEASE ARM LAMP, ARM LAMP GOES OUT.



CHAFF DISPENSER ASSEMBLY ELECTRICAL TEST (ON AIRCRAFT) (cont)

16. ON DCP, SET ARM-SAFE SWITCH TO ARM POSITION, ARM LAMP LIGHTS. (IF NOT, REFER TO MALFUNCTION 3 IN TABLE 2-3.

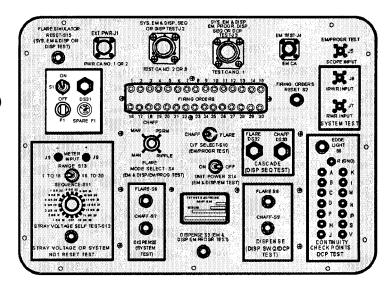


17. ON M92 TEST SET, PRESS POWER ON LAMP, LAMP LIGHTS. (IF LAMP DOESN'T LIGHT, REFER TO MALFUNCTION 1 IN TABLE 2-3.) RELEASE LAMP, LIGHTS GOES OUT.

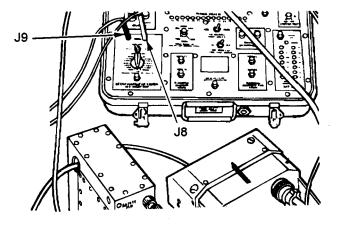
CAUTION

On M92 test set, ensure UNIT POWER switch is in OFF position.

18. ON M92 TEST SET, SET POWER ON SWITCH TO ON POSITION. POWER ON LAMP LIGHTS.



- 19. PERFORM THE TESTS FOR STRAY VOLTAGE AND SYSTEM NOT RESET AS FOLLOWS:
- 20. CONNECT MULTIMETER RED (+) LEAD TO J8 OF M92 TEST SET AND BLACK (-) LEAD OF MULTIMETER TO J9 OF M92 TEST SET.
- 21. SET MULTIMETER SCALE TO READ 28 VDC OR GREATER.



2-25. CHAFF DISPENSER ASSEMBLY ELECTRICAL TEST (ON AIRCRAFT) (cont)

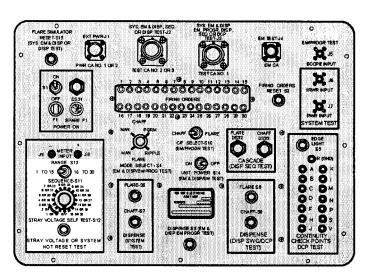
CHAFF DISPENSER ASSEMBLY ELECTRICAL TEST (ON AIRCRAFT) (cont)

- 22. ON M92 TEST SET, SET RANGE SWITCH TO 1 TO 15 POSITION, AND SEQUENCE SWITCH TO OFF
- 23. ON M92 TEST SET, PRESS STRAY VOLTAGE SELF TEST SWITCH, MULTIMETER READS APPROXIMATELY 28 VDC.
- 24. RELEASE STRAY VOLTAGE SELF TEST SWITCH.

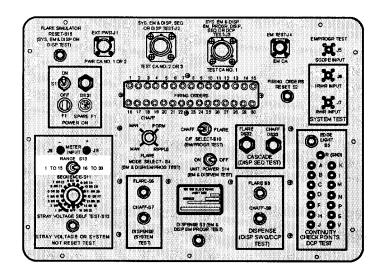
NOTE

A reading of no greater than 0.01 volt continuous, or less than 1 volt for less than 3 seconds duration, should not be cause for rejection.

25. ON M92 TEST SET, ROTATE SEQUENCE S11 SWITCH CLOCKWISE, PRESS STRAY VOLTAGE (S12) SWITCH AT EACH POSITION TO READ MULTIMETER, UNTIL THE SWITCH IS RETURNED TO THE OFF POSITION.



26. ON M92 TEST SET, SET RANGE SWITCH TO 16 TO 30 POSITION, AND REPEAT STEP 25 ABOVE.



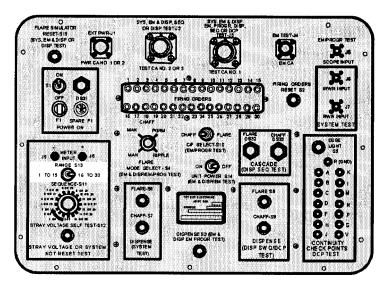
CHAFF DISPENSER ASSEMBLY ELECTRICAL TEST (ON AIRCRAFT) (cont)

27. ON M92 TEST SET, SET RANGE SWITCH TO 1 TO 15 POSITION.

NOTE

If there is a reading on the multimeter, reject the M130 general purpose dispenser system for maintenance.

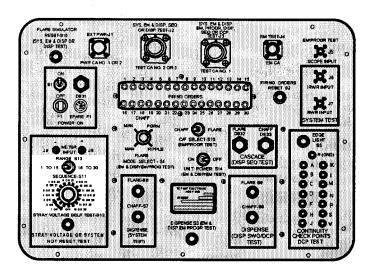
- 28. SET MULTIMETER TO THE LOWEST DC VOLTAGE RANGE AND REPEAT STEP 25 WITHOUT PRESSING STRAY VOLTAGE SWITCH.
- 29. ON M92 TEST SET, SET RANGE SWITCH TO 16 TO 30 POSITION AND REPEAT STEP 25 WITHOUT PRESSING STRAY VOLTAGE SWITCH.





On the M92 test set, do not press STRAY VOLTAGE SELF TEST switch during the following system not reset test.

- 30. SET MULTIMETER TO THE APPROPRIATE SCALE TO OBTAIN THE READING OF 200 OHMS OR GREATER.
- 31. ON M92 TEST SET, SET RANGE SWITCH TO 1 TO 15 POSITION,
- 32. ON M92 TEST SET, ROTATE SEQUENCE SWITCH CLOCKWISE, PAUSING AT EACH POSITION TO READ MULTIMETER, UNTIL THE SWITCH IS RETURNED TO THE OFF POSITION. MULTIMETER SHOULD READ 800 TO 1000 OHMS IN EVERY POSITION EXCEPT THE FIRST POSITION (NUMBER 1), WHICH SHOULD READ 250 TO 400

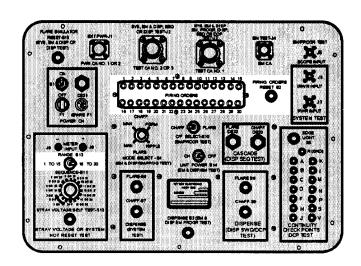


OHMS. IF MULTIMETER READS 600 TO 700 OHMS AT ANY POSITION (2 THRU 30), PRESS AND RELEASE MANUAL SYSTEM RESET SWITCH ON DISPENSER TEST ADAPTER ASSEMBLY TO RESET SYSTEM.

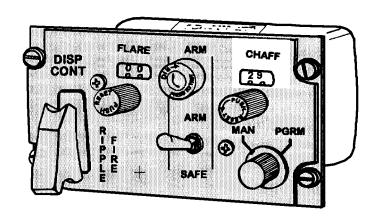
2-25. CHAFF DISPENSER ASSEMBLY ELECTRICAL TEST (ON AIRCRAFT) (cont)

CHAFF DISPENSER ASSEMBLY ELECTRICAL TEST (ON AIRCRAFT) (cont)

- 33. ON M92 TEST SET, SET RANGE SWITCH TO 16 TO 30 POSITION AND REPEAT STEP 32.
- 34. REMOVE MULTIMETER.
- 35. ON M92 TEST SET, PRESS FIRING ORDER RESET BUTTON. FIRING ORDER INDICATORS NO. 1 THRU 30 CHANGE TO RED.

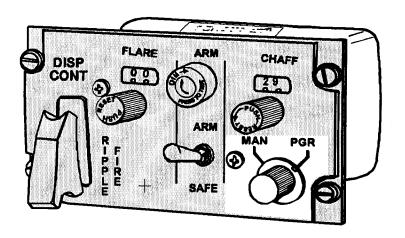


36. PRESS PILOT'S CHAFF DISP SWITCH ON AIRCRAFT. ON DCP, CHAFF COUNTER READS 29. ON M92 TEST SET, FIRING ORDER INDICATOR NO. 1 CHANGES FROM RED TO WHITE. (IF NOT, REFER TO MALFUNCTION 14 IN TABLE 2-3.)

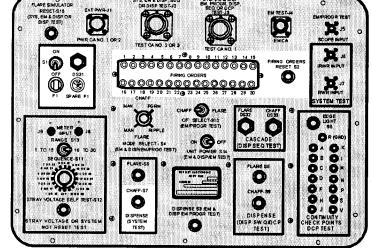


CHAFF DISPENSER ASSEMBLY ELECTRICAL TEST (ON AIRCRAFT) (cont)

37. ON DCP, SET MAN-PGRM SWITCH TO PGRM POSITION.



- 38. PRESS COPILOT'S CHAFF DISP SWITCH ON AIRCRAFT. ON DCP, THE NUMBER SHOWN ON CHAFF COUNTER READS 29. MULTIPLY THE COUNT SET ON THE SALVO BY THE COUNT SET ON BURST (ON EM). SUBTRACT THAT AMOUNT FROM THE CHAFF COUNTER READING OF 29. ON M92 TEST SET, THE SAME NUMBER OF FIRING ORDER INDICATOR NUMBERS CHANGE FROM RED TO WHITE. REPEAT PROGRAM BY PRESSING CHAFF DISP SWITCH AGAIN UNTIL FIRING ORDER INDICATORS CHANGE FROM RED TO WHITE. (IF NOT, **REFER TO MALFUNCTIONS 5** IN TABLE 2-2 AND MALFUNCT-ION 13 IN TABLE 2-3.)
- 39. ON DISPENSER TEST ADAPTER ASSEMBLY, PRESS AND RELEASE MANUAL SYSTEM RESET SWITCH.

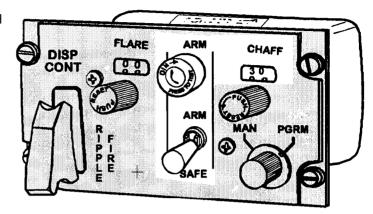


- 40. ON M92 TEST SET, PRESS FIRING ORDER RESET BUTTON. FIRING ORDER INDICATORS NO. 1 THRU 30 CHANGE TO RED.
- 41. ON M92 TEST SET, SET POWER ON SWITCH TO OFF POSITION, POWER ON LAMP GOES OFF.

2-25. CHAFF DISPENSER ASSEMBLY ELECTRICAL TEST (ON AIRCRAFT) (cont)

CHAFF DISPENSER ASSEMBLY ELECTRICAL TEST (ON AIRCRAFT) (cont)

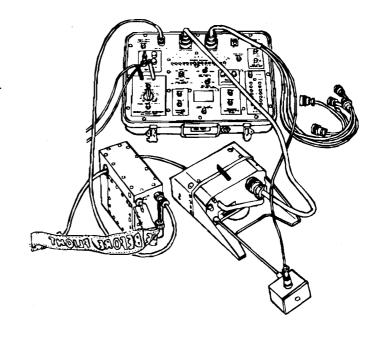
- 42. ON DCP, SET ARM-SAFE SWITCH TO SAFE POSITION, ARM LAMP GOES OFF. (IF NOT, REFER TO MALFUNCTION 11 IN TABLE 2-3.)
- 43. ON DCP, RESET CHAFF
 COUNTER TO READ 30 AND
 PLACE MAN/PRGM SWITCH TO
 MAN POSITION.



- 44. DISCONNECT AIRCRAFT POWER BY SETTING M130 MAIN POWER BREAKER TO OFF POSITION.
- 45. SET M130 POWER-BY-PASS SWITCH (IF ONE IS PRESENT IN AIRCRAFT) TO NORMAL POSITION.

CHAFF DISPENSER ASSEMBLY ELECTRICAL TEST (ON AIRCRAFT) (cont)

- 46. REINSTALL SYSTEM SAFETY PIN.
- 47. DISCONNECT DISPENSER TEST ADAPTER ASSEMBLY FROM DISPENSER ASSEMBLY.



- 48. RETURN ALL CABLES AND TEST ADAPTERS TO CARRYING CASE COVER OF M92 TEST SET.
- 49. CLOSE AND SECURE M92 TEST SET.

END OF TEST

2-26. FLARE DISPENSER ASSEMBLY ELECTRICAL TEST (ON AIRCRAFT)

DESCRIPTION

This task covers: Flare dispenser assembly electrical test (on aircraft).

INITIAL SETUP

Tools/Test and Support
Equipment:
Tool Kit, Electronic, Equipment,
TK-101/G
M92 Test Set
Auxiliary Power Unit
Multimeter AN/PSM-45A

Personnel Required: MOS 68N

Equipment Conditions:

On aircraft.

Payload module assembly removed.

Aircraft safe procedures performed per applicable aircraft TM.

General Safety Instructions: Never work on electronic equipment unless there is another person nearby who is familiar with operation and hazards of this equipment and first aid. When aided by operator, technician must warn operator about dangerous area.

Power must not be applied to unit under test while test leads are being connected to or removed from unit assemblies/circuits under test.

WARNING

For aircraft with AN/ALQ-156(V) countermeasures set installed, do not stand within 3 feet of transmit antenna when the AN/ALQ-156(V) equipment is on. High frequency electromagnetic radiation can cause internal burns without causing any sensation of heat. If you feel the slightest warming effect while near the transmit antenna, move away quickly.

NOTE

Refer to figures 2-3 and 2-4 (para 2-22) for overall setup details

FLARE DISPENSER ASSEMBLY ELECTRICAL TEST (ON AIRCRAFT)

- FOR AIRCRAFT WITH AN/ALQ-156(V)
 COUNTERMEASURES SET INSTALLED, PERFORM THE
 FOLLOWING OPERATIONS:
 - On control indicator, ensure that TEST/FLARE switch guard and POWER ON/OFF switch are in the down position (FLARE and OFF positions respectively).

- Provide aircraft power to the AN/ALQ-156(V) countermeasures set
- On the control indicator, set POWER ON/OFF switch to ON position, WRMUP lamp lights (STBY lamp maybe lighted). When the WRMUP lamp goes off and if STBY lamp previously was not lighted, press the PUSH FOR STANDBY switch, STBY lamp lights. Further, press the PUSH FOR STANDBY switch which will cause the STBY lamp to go out, indicating that the system is in the ON mode (antenna is transmitting). For this test operation, press the PUSH FOR STANDBY switch again, STBY lamp lights.

NOTE

The actual time that the STATUS WRMUP lamp remains lit is a function of equipment and environmental temperature. If the equipment has been off for a short period of time and the environmental temperature is near +131 °F (+155 °C), the STATUS WRMUP lamp may go out in as little as 15 seconds. At the opposite extreme, equipment has not been on for a long period of time and the environmental temperature is near -22 °F (-30 °C), the STATUS WRMUP lamp may remain lit for up to 30 minutes. However, under nominal conditions +77 °F (+25 °C), the STATUS WRMUP lamp will go out in approximately 8 to 10 minutes. If further information about AN/ALQ-156(V) countermeasures set is required, see TM 11-6865-263-12, operator's and aviation unit maintenance manual.

2-26. FLARE DISPENSER ASSEMBLY ELECTRICAL TEST (ON AIRCRAFT) (cont)

FLARE DISPENSER ASSEMBLY ELECTRICAL TEST (ON AIRCRAFT) (cont)

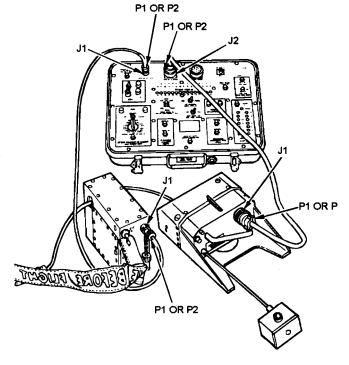
WARNING

Ensure payload module assembly is not connected to dispenser assembly at any time during this test.

- 2. OBTAIN M92 TEST SET AND CONNECT EITHER END (P1 OR P2) OF TEST CABLE NO. 2 TO J2 ON M92 TEST SET.
- CONNECT OTHER END (P1 OR P2)
 OF TEST CABLE NO. 2 TO J1
 DISPENSER TEST ADAPTER
 ASSEMBLY (P/N 9326211-1,
 PROVIDED WITH M92 TEST SET).
- 4. INSERT THE MOUNTING ROD OF FLARE SIMULATOR ASSEMBLY (P/N 9326117, PROVIDED WITH M92 TEST SET) INTO THE FACE PLATE OF DISPENSER TEST ADAPTER ASSEMBLY, WITH J1 ON FLARE SIMULATOR ASSEMBLY FACING UP. SECURE THUMBSCREW AT INTERCONNECTION.
- 5. REMOVE DUST OR ANY FOREIGN PARTICLES FROM BREECH AND MOUNTING PLATE OF DISPENSER ASSEMBLY, USING A SOFT-HAIRED BRUSH (ITEM 2, APPX D). IF BREECH SHOWS EVIDENCE OF MOISTURE, WIPE DRY WITH A CLEAN, LINT-FREE CLOTH (ITEM 3, APPX D).
- 6. CONNECT DISPENSER TEST
 ADAPTER ASSEMBLY TO BREECH OF 7.
 DISPENSER ASSEMBLY. SECURE
 BOTH MOUNTING STUDS. ENSURE CF SELECTOR SWITCH IS IN "F"
 POSITION.

NOTE

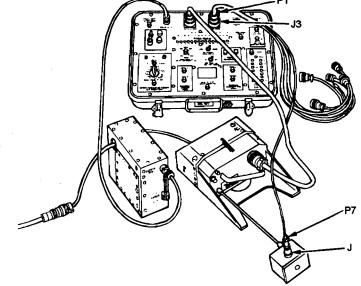
Insure dispenser test adapter assembly is mounted securely to breech of dispenser assembly.



- 7. CONNECT EITHER END (P1 OR P2) OF POWER CABLE NO. 1 TO J1 OF M92 TEST SET.
 - 8. CONNECT OTHER END (P1 OR P2) OF POWER CABLE NO. 1 TO J1 (28 V) OF EM OR REMOTE CONNECTION ON AIRCRAFT.

FLARE DISPENSER ASSEMBLY ELECTRICAL TEST (ON AIRCRAFT) (cont)

- 9. REMOVE SYSTEM SAFETY PIN.
- 10. CONNECT P1 OF TEST CABLE NO. 1 TO J3 OF M92 TEST SET.
- 11. CONNECT P7 ON TEST CABLE NO. 1 TO J1 ON FLARE SIMULATOR ASSEMBLY. SUPPORT FLARE SIMULATOR ASSEMBLY WHEN MAKING CONNECTION.

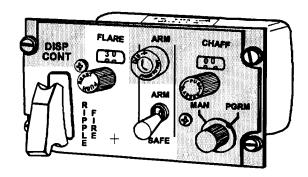


12. SET M130 POWER-BY-PASS SWITCH (IF ONE IS PRESENT IN AIRCRAFT) TO BY-PASS POSITION.

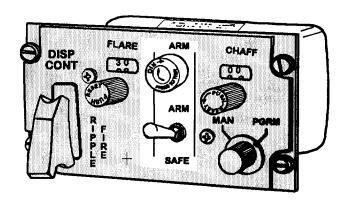
2-26. FLARE DISPENSER ASSEMBLY ELECTRICAL TEST (ON AIRCRAFT) (cont)

FLARE DISPENSER ASSEMBLY ELECTRICAL TEST (ON AIRCRAFT) (cont)

13. ON DCP, ENSURE ARM-SAFE SWITCH IS IN SAFE POSITION, AND THE RIPPLE FIRE SWITCH IS IN THE DOWN POSITION. SET FLARE COUNTER TO 30



- 14. PROVIDE AIRCRAFT POWER TO THE DCP BY SETTING M130 MAIN POWER BREAKER TO ON POSITION.
- 15. ON DCP, PRESS ARM LAMP, ARM LAMP LIGHTS. (IF IAMP DOESN'T LIGHT, REFER TO MALFUNCTION 2 IN TABLE 2-3). RELEASE ARM LAMP, ARM LAMP GOES OUT.
- 16. ON DCP, SET ARM-SAFE SWITCH TO ARM POSITION, ARM LAMP LIGHTS. (IF LAMP DOESN'T LIGHT, REFER TO MALFUNCTION 3 IN TABLE 2-3.)

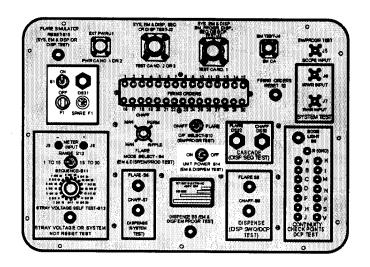


17. ON M92 TEST SET, PRESS POWER ON LAMP, LAMP LIGHTS. (IF LAMP DOESN'T LIGHT, REFER TO MALFUNCTION 1 IN TABLE 2-3,) RELEASE LAMP, LIGHT GOES OUT.

CAUTION

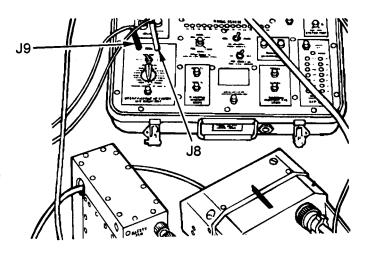
On M92 test set, ensure UNIT POWER switch is in OFF position.

18. ON M92 TEST SET, SET POWER ON SWITCH TO ON POSITION. POWER ON LAMP LIGHTS.



FLARE DISPENSER ASSEMBLY ELECTRICAL TEST (ON AIRCRAFT) (cont)

- 19. PERFORM THE TESTS FOR STRAY VOLTAGE AND SYSTEM NOT RESET AS FOLLOWS:
- 20. CONNECT MULTIMETER RED (+) LEAD TO J8 OF M92 TEST SET AND BLACK (-) LEAD OF MULTIMETER TO J9 OF M92 TEST SET.
- 21. SET MULTIMETER SCALE TO READ 28 VDC OR GREATER.

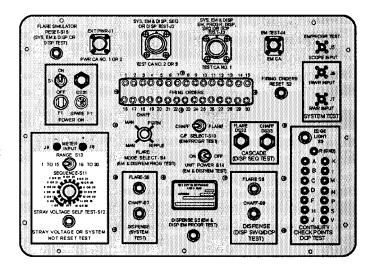


- 22. ON M92 TEST SET, SET RANGE SWITCH TO 1 TO 15 POSITION, AND SEQUENCE SWITCH TO OFF.
- 23. ON M92 TEST SET, PRESS STRAY VOLTAGE SELF TEST SWITCH, MULTIMETER READS APPROXIMATELY 28 VDC.
- 24. RELEASE STRAY VOLTAGE SELF TEST SWITCH.

NOTE

A reading of no greater than 0.01 volt continuous, or less than 1 volt for less than 3 seconds duration, should not be cause for rejection.

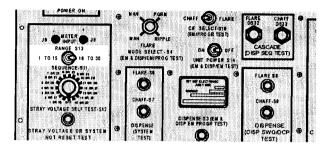
25. ON M92 TEST SET, ROTATE SEQUENCE S11 SWITCH CLOCKWISE, PRESS STRAY VOLTAGE SWITCH (S12) AT EACH POSITION TO READ MULTIMETER, UNTIL THE SWITCH IS RETURNED TO OFF POSITION.



2-26. FLARE DISPENSER ASSEMBLY ELECTRICAL TEST (ON AIRCRAFT) (cont)

FLARE DISPENSER ASSEMBLY ELECTRICAL TEST (ON AIRCRAFT) (cont)

26. ON M92 TEST SET, SET RANGE SWITCH TO 16 TO 30, AND REPEAT STEP 25.

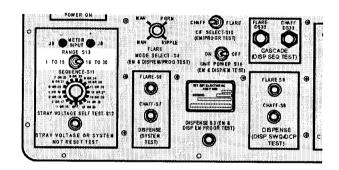


27. ON M92 TEST SET, SET RANGE SWITCH TO 1 TO 15 POSITION.

NOTE

If there is a reading on the multimeter, reject the M130 general purpose dispenser system for maintenance.

28. SET MULTIMETER TO THE LOWEST DC VOLTAGE RANGE AND REPEAT STEP 25 WITHOUT PRESSING STRAY VOLTAGE SWITCH.

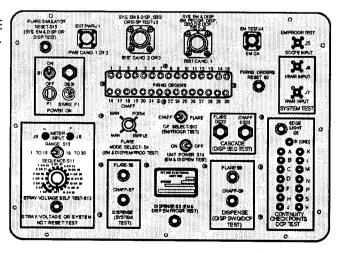


29. ON M92 TEST SET, SET RANGE SWITCH TO 16 TO 30 AND REPEAT STEP 25 WITHOUT PRESSING STRAY VOLTAGE SWITCH.



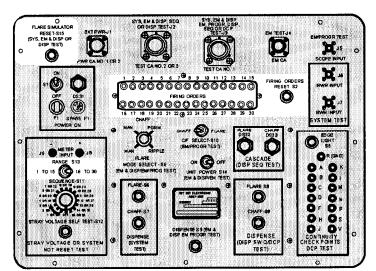
On the M92 test set, do not press STRAY VOLTAGE SELF TEST switch during the following system not reset test.

- 30. SET MULTIMETER TO THE APPROPRIATE SCALE TO OBTAIN THE READING OF 200 OHMS OR GREATER.
- 31. ON M92 TEST SET, SET RANGE SWITCH TO 1 TO 15 POSITION.
- 32. ON M92 TEST SET, ROTATE SEQUENCE SWITCH CLOCKWISE, PAUSING AT EACH POSITION TO READ MULTIMETER, UNTIL THE SWITCH IS RETURNED TO THE OFF POSITION. MULTIMETER SHOULD READ 800 TO 1000 OHMS IN EVERY POSITION EXCEPT THE FIRST POSITION (NUMBER 1), WHICH SHOULD READ 250 TO 400 OHMS.



FLARE DISPENSER ASSEMBLY ELECTRICAL TEST (ON AIRCRAFT) (cont)

- 32. (cont)
 - IF MULTIMETER READS 600 TO 700 OHMS AT ANY POSITION (2 THRU 30), PRESS AND RELEASE MANUAL SYSTEM RESET SWITCH ON DISPENSER TEST ADAPTER TO RESET SYSTEM.
- ON M92 TEST SET, SET RANGE SWITCH TO 16 TO 30 AND REPEAT STEP 32.
- 34. REMOVE MULTIMETER.
- 35. ON M92 TEST SET, PRESS FIRING ORDER RESET BUTTON. FIRING ORDER INDICATORS NO. 1 THRU 30 CHANGE TO RED.
- 36. IF INDICATOR LAMP (AMBER)
 ON FLARE SIMULATOR
 ASSEMBLY IS NOT LIT, PRESS
 FLARE SIMULATOR RESET
 BUTTON ON M92 TEST SET AND
 HOLD DOWN APPROXIMATELY
 10 SECONDS UNTIL THE
 INDICATOR LAMP ON FLARE
 SIMULATOR ASSEMBLY LIGHTS.



NOTE

Ensure that cables or other objects do not block the flare simulator light from the flare sensor assembly.

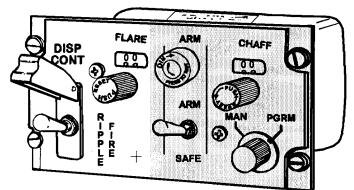
- 37. ON PILOT'S CYCLIC STICK (OR CONSOLE, AS APPLICABLE), PRESS FLARE DISP BUTTON ONCE. ON DCP, FLARE COUNTER READS 29. ON M92 TEST SET, FIRING ORDER NO. 1 CHANGES FROM RED TO WHITE. (IF NOT, REFER TO MALFUNCTIONS 4, 5, AND 6 IN TABLE 2-3.)
- 38. PRESS EACH FLARE DISP BUTTON ONCE THROUGHOUT THE AIRCRAFT, IF APPLICABLE, TO ENSURE EACH SWITCH IS OPERABLE. ON DCP, FLARE COUNTER COUNTS DOWN IN GROUPS OF THREE EACH TIME A SWITCH IS PRESSED. ON M92 TEST SET, THREE FIRING ORDER INDICATORS CHANGE TO WHITE EACH TIME A SWITCH IS PRESSED. (IF NOT, REFER TO MALFUNCTIONS 8 AND 9 IN TABLE 2-3.)

2-26. FLARE DISPENSER ASSEMBLY ELECTRICAL TEST (ON AIRCRAFT) (cont)

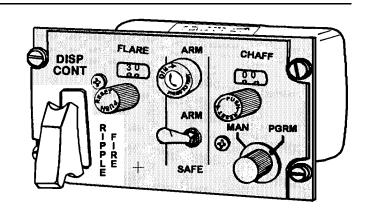
FLARE DISPENSER ASSEMBLY ELECTRICAL TEST (ON AIRCRAFT) (cont)

NOTE

Hold down switch long enough for the FLARE counter to count down at least two groups of three (on aircraft where this is applicable). Using a wristwatch with a sweep second hand, ensure that the time interval between each group of three counts is not less than 2 seconds or longer than 3 seconds.



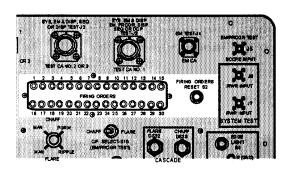
- 39. ON THE AN/ALQ-156(V) CONTROL INDICATOR (IF ONE IS PRESENT IN AIRCRAFT), RAISE TEST/FLARE SWITCH GUARD TO UP POSITION. SET TEST/FLARE SWITCH MOMENTARILY (APPROX. 1 SECOND) TO UP POSITION (TEST). FLARE COUNTER ON DCP CHANGES IN GROUPS OF THREE FOR EACH UP POSITION.
- 40. ON DCP, RAISE RIPPLE FIRE SWITCH GUARD AND PLACE SWITCH IN UP POSITION UNTIL FLARE COUNTER READS 00. ON M92 TEST SET, THE REMAINING FIRING ORDERS TO CHANGE FROM RED TO WHITE. (IF NOT, REFER TO MALFUNCTIONS 7 AND 10 IN TABLE 2-3.)



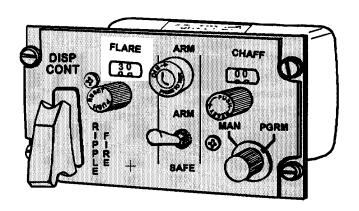
- 41. ON DCP, DEPRESS RIPPLE FIRE SWITCH GUARD TO DOWN POSITION.
- 42. ON THE AN/ALQ-156(V) CONTROL INDICATOR (IF ONE IS PRESENT IN THE AIRCRAFT), SET POWER ON/OFF SWITCH TO THE OFF POSITION. ALSO, ENSURE THAT TEST/FLARE SWITCH GUARD IS IN DOWN POSITION.
- 43. ON DISPENSER TEST ADAPTER ASSEMBLY, PRESS AND RELEASE MANUAL SYSTEM RESET SWITCH.

FLARE DISPENSER ASSEMBLY ELECTRICAL TEST (ON AIRCRAFT) (cont)

44. ON M92 TEST SET, PRESS FIRING ORDER RESET BUTTON. FIRING ORDER INDICATORS NO. 1 THRU 30 CHANGE TO RED.



45. ON DCP, RESET FLARE COUNTER TO READ 30.

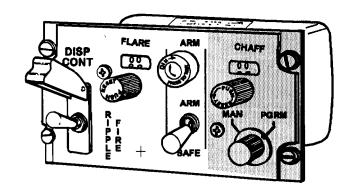


46. ON DCP, SET ARM-SAFE SWITCH TO SAFE POSITION, ARM LAMP GOES OUT. (IF NOT, REFER TO MALFUNCTION 11 IN TABLE 2-3.)

NOTE

The following testis to verify that ripple fire feature is operative when system is not in the armed mode.

47. ON DCP, RAISE RIPPLE FIRE SWITCH GUARD AND PLACE SWITCH TO UP POSITION UNTIL FLARE COUNTER READS 00 AND ARM LAMP LIGHTS. ON M92 TEST SET, FIRING ORDER

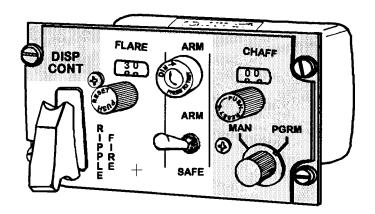


INDICATORS NO. 1 THRU 30 CHANGE FROM RED TO WHITE. (IF NOT, REFER TO MALFUNCTIONS 7 AND 10 IN TABLE 2-3).

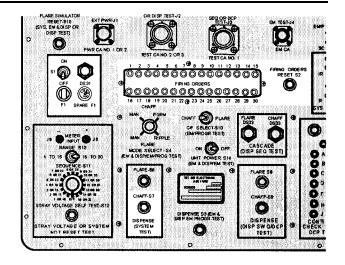
2-26. FLARE DISPENSER ASSEMBLY ELECTRICAL TEST (ON AIRCRAFT) (cont)

FLARE DISPENSER ASSEMBLY ELECTRICAL TEST (ON AIRCRAFT) (cont)

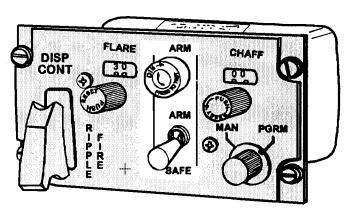
- 48. ON DCP, DEPRESS RIPPLE FIRE SWITCH GUARD TO DOWN POSITION AND ARM LAMP GOES OUT. (IF NOT, REFER TO MALFUNCTION 11 IN TABLE 2-3.)
- 49. ON DCP, RESET FLARE COUNTER TO READ 30.
- 50. ON DCP, SET ARM-SAFE SWITCH TO ARM POSITION, ARM LAMP LIGHTS. (IF NOT, REFER TO MALFUNCTION 3 IN TABLE 2-3.)



- 51. ON DISPENSER TEST ADAPTER ASSEMBLY, PRESS AND RELEASE MANUAL SYSTEM RESET SWITCH.
- 52. ON M92 TEST SET, PRESS FIRING ORDER RESET BUTTON. FIRING ORDER INDICATORS NO. 1 THRU 30 CHANGE TO RED.
- 53. ON M92 TEST SET, SET POWER ON SWITCH TO OFF POSITION. POWER ON LAMP GOES OUT.



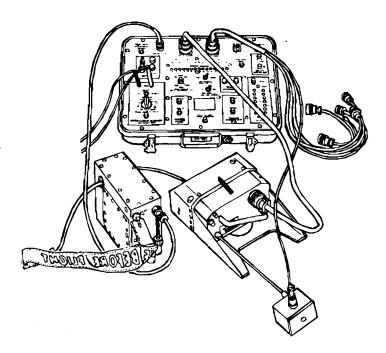
54. ON DCP, SET ARM-SAFE SWITCH TO SAFE POSITION, ARM LAMP GOES OUT. (IF NOT, REFER TO MALFUNCTION 11 IN TABLE 2-3.)



- 55. DISCONNECT AIRCRAFT POWER BY SETTING M130 MAIN POWER BREAKER TO OFF POSITION.
- 56. SET M130 POWER-BY-PASS SWITCH (IF ONE IS PRESENT IN AIRCRAFT) TO NORMAL POSITION.

FLARE DISPENSER ASSEMBLY ELECTRICAL TEST (ON AIRCRAFT) (cont)

- 57. REINSTALL SYSTEM SAFETY PIN.
- 58. DISCONNECT DISPENSER TEST ADAPTER ASSEMBLY FROM DISPENSERASSEMBLY.
- 59. DISCONNECT FLARE
 SIMULATORASSEMBLY FROM
 DISPENSERTEST ADAPTER
 ASSEMBLY.



- 60. RETURN ALLCABLES,FLARE SIMULATOR, AND TEST ADAPTERS TO CARRYING CASE COVER OF M92 TEST SET.
- 61. CLOSE AND SECURE M92 TEST SET.

END OF TEST

Section XI. PREPARATION FOR STORAGE OR SHIPMENT

Section Contents	<u>Para</u>
General	2-27
Storage	2-28
Packing Instructions for M130 General Purpose Dispenser	2-29

2-27. GENERAL

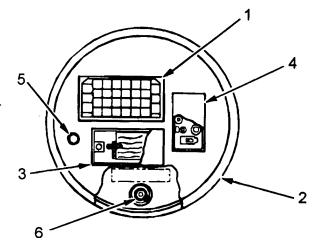
This section covers instructions for preparing the M130 general purpose dispenser for storage or shipment.

2-28. STORAGE

The M130 general purpose dispenser when received is packaged and packed to provide maximum protection for long term storage. The M130 general purpose dispenser should be stowed in the original container.

2-29. PACKING INSTRUCTIONS FOR M130 GENERAL PURPOSE DISPENSER

- 1. Insert dispenser assembly with payload module assembly (1) attached into largest cutout in cushion of drum (2) as illustrated.
- 2. Lift flap covering opening of second largest cutout in cushion assembly and insert electronics module assembly (3) into opening with 28 V connector positioned up and facing away from hinge of flap.
- 3. Insert "Remove Before Flight" safety pin and fold safety flag neatly on top of electronics module assembly (3).
- 4. Close flap on top of safety flag and electronics module assembly (3).
- 5. Lift flap covering remaining cutout in cushion assembly and insert dispenser control panel assembly (4) face up into opening and close flap.
- Insert ball hexagonal key screwdriver
 in cushion as illustrated.
- 7. Place cover on drum and seal.
- Insure that drum vent cap (6) is closed at all times (it is opened only during air shipment).



Section XII. PAYLOAD MODULE ASSEMBLY LOADING AND UNLOADING

Section Contents	<u>Para</u>
Safety Precautions	2-30
Loading Payload Module Assembly Procedures	2-31
Unloading Payload Module Assembly Procedures	2-32

2-30. SAFETY PRECAUTIONS

NOTE

See TM 9-1370-203-20&P for procedures for unpacking ammunition material.

The following safety precautions shall be observed during handling, loading, and storage of chaff, flare, and impulse cartridges.

- 1. Shipping containers will be protected at all times from high temperatures and rain.
- 2. Only one shipping container will be opened at a time.
- The remaining units in an opened, partially emptied shipping container will be secured in the container with appropriate packing material to protect contents from moisture and rough handling.
- 4. All munitions put in storage must be retained in their original shipping container.
- 5. Chaff, flare, and impulse cartridges must be kept away from fires and high temperatures.
- 6. Chaff, flare, and impulse cartridges must not be dropped, rolled, or handled in a rough or careless manner. Chaff, flare, or impulse cartridges that exhibit any sign of visible damage, or have been subjected to rough handling, will not be loaded into payload module assemblies. Unserviceable flare or impulse cartridges will be disposed of by EOD personnel. Unserviceable chaff cartridges will be scrapped.
- 7. Flare and impulse cartridges must be handled with extreme care. Each cartridge generates an extremely high gas pressure and temperature if accidentally initiated. Do not drop, roll, or handle in a rough or careless manner. Under no circumstances will a flare or chaff cartridge be hammered or forced into a payload module assembly.
- 8. Avoid exposure to high concentration of chaff, which can cause temporary irritation to eyes and/or throat.
- 9. Refer to TM 9-1300-206, Ammunition and Explosives Standards, for general ammunition care, handling, and safety.

2-31. LOADING PAYLOAD MODULE ASSEMBLY PROCEDURES

DESCRIPTION

This task covers: Loading payload module assembly.

INITIAL SETUP

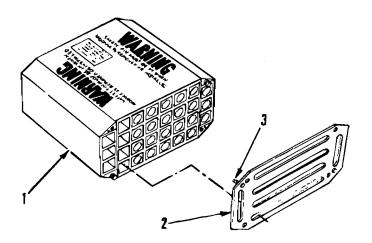
Tool/Test and Support
Equipment
Tool Kit, Electronic, Equipment,
TK-101/G
Screwdriver, Ball Hexagonal Key

Personnel Required: MOS 68N

General Safety Instructions:

Refer to all warnings in paragraph 2-30

- 1. PLACE PAYLOAD MODULE ASSEMBLY (1) SO THAT THE RETAINING PLATE (2) IS FACING UP.
- 2. REMOVE RETAINING PLATE (2) FROM PAYLOAD MODULE ASSEMBLY (1) BY LOOSENING TWO RETAINING SCREWS (3).

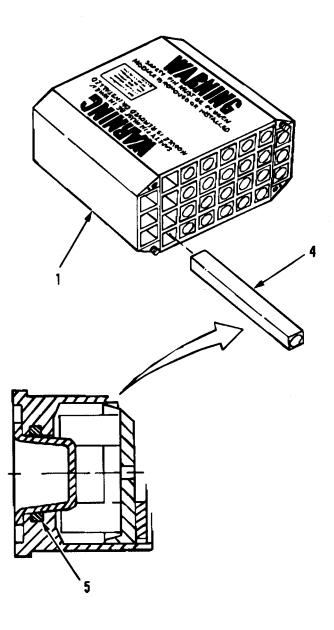


WARNING

Chaff, flare, or impulse cartridge that exhibit any sign of visible damage, or have been subjected to rough handling, will not be loaded into payload module assemblies, Unserviceable chaff, flare, or impulse cartridges will be disposed of by EOD personnel. Chaff or flare cartridges shall not be hammered or forced into payload module assemblies.

LOADING PAYLOAD MODULE ASSEMBLY PROCEDURES (cont)

- 3. INSERT ONE CHAFF OR FLARE CARTRIDGE (4) AT A TIME INTO EACH CHAMBER OF PAYLOAD MODULE ASSEMBLY (1), USING HAND PRESSURE.
- 4. REMOVE PLASTIC DUST CAPS FROM EACH FLARE CARTRIDGE, MAKING SURE THAT THE PREFORMED PACKING (5) REMAINS INSTALLED ON THE FLARE CARTRIDGE. (CHAFF CARTRIDGES DO NOT CONTAIN DUST CAPS AND PRE-FORMED PACKING.)



2-31. LOADING PAYLOAD MODULE ASSEMBLY PROCEDURES (cont)

LOADING PAYLOAD MODULE ASSEMBLY PROCEDURES (cont)

WARNING

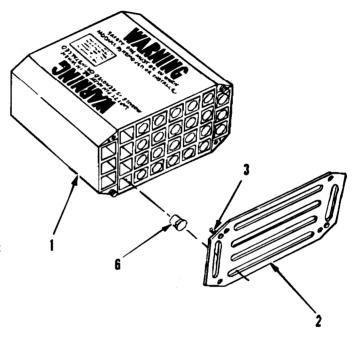
Chaff and flare cartridges shall not be mixed loaded in a payload module assembly. Flare cartridges will not be loaded in aircraft specified for chaff configurations only.

- INSERT ONE IMPULSE CARTRIDGE
 (6) INTO EACH CHAFF OR FLARE CARTRIDGE.
- 6. INSTALL RETAINING PLATE (2) BY SECURING TWO RETAINING SCREWS (3) TO PAYLOAD MODULE ASSEMBLY (1).

WARNING

System tests (para 2-9 thru 2-11) must be performed to ensure there is no stray voltage. All aircraft power must be removed from the system prior to loading the payload module assembly in the dispenser assembly.

Before installing the payload module assembly perform the following: On dispenser control panel, ensure ARM-SAFE switch is in the SAFE position and RIPPLE FIRE switch guard is in DOWN position. Ensure that the C-F selector switch index on dispenser assembly is pointing to correct position for chaff (C) or flare (F).



LOADING PAYLOAD MODULE ASSEMBLY PROCEDURES (cont)

7. PLACE ARM-SAFE SWITCH ON THE DISPENSER CONTROL PANEL ASSEMBLY IN THE SAFE POSITION.

NOTE

Safety pin(s) is removed only to perform authorized tests or immediately prior to flight.

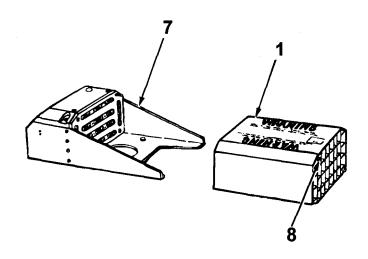
8. INSTALL SAFETY PIN(S) IN SAFETY SWITCH(ES) ON ELECTRONICS MODULE ASSEMBLY OR REMOTE CONNECTION ON AIRCRAFT.

WARNING

Payload module assemblies loaded with munitions must be handled with extreme care to avoid damage to the payload module assembly or cartridge, Modules with visible damage will not be used. Damaged munitions will be disposed of by EOD personnel.

Keep face away from the front of payload module assembly when performing the procedure in step 9.

 SLIDE PAYLOAD MODULE ASSEMBLY (1) INTO DISPENSER ASSEMBLY (7). SECURE TWO STUDS (8) EVENLY.



2-32. UNLOADING PAYLOAD MODULE ASSEMBLY PROCEDURES

DESCRIPTION

This task covers: Unloading payload module assembly

INITIAL SETUP

Tools/Test and Support
Equipment:
Tool Kit, Electronic, Equipment,
TK-101/G
Screwdriver, Ball Hexagonal Key

Personnel Required: MOS 68N General Safety Instructions:

All aircraft power to the M130 general purpose dispenser system must be turned off prior to removal of payload module assembly from dispenser assembly. Safety pin must be installed on electronics module assembly or remote connection.

Keep hands and face away from front of payload module assembly during removal of loaded payload module assembly.

- 1. INSTALL SAFETY PIN(S) INTO SAFETY SWITCH(ES) ON ELECTRONICS MODULE ASSEMBLY OR REMOTE CONNECTION ON AIRCRAFT.
- SET ARM-SAFE SWITCH ON DISPENSER CONTROL PANEL ASSEMBLY TO SAFE POSITION.
- 3. SET MI 30 GENERAL PURPOSE DISPESER MAIN POWER BREAKER TO OFF POSITION.



If there is an indication that a misfire occurred, notify EOD personnel for disposal after removal.

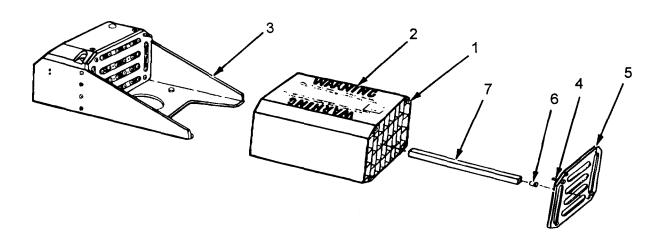
UNLOADING PAYLOAD MODULE ASSEMBLY PROCEDURES (cont)

- 4. LOOSEN TWO STUD BOLTS (1) AND REMOVE PAYLOAD MODULE ASSEMBLY (2) FROM DISPENSER ASSEMBLY (3).
- 5. LOOSEN TWORETAINING SCREWS (4) AND REMOVE RETAINING PLATE (5).

WARNING

Be familiar with all safety precautions prior to handling munitions to prevent injury or damage to equipment.

- 6. REMOVE EXPENDED AND UNEXPENDED IMPULSE CARTRIDGES (6) AND CHAFF OR FLARE CARTRIDGES (7) FROM PAYLOAD MODULE ASSEMBLY (2).
- 7. RE-PACK UNEXPENDED ITEMS IN ORIGINAL CONTAINERS AND RETURN TO AMMUNITION STORAGE AREA.



END OF TASK

APPENDIX A REFERENCES

A-1. PURPOSE

This appendix lists publications which apply to maintaining the Dispenser, General Purpose, Aircraft: M130.

A-2. ARRANGEMENT

The publications are arranged by type and then in alphanumeric order by publication number.

TECHNICAL MANUALS (TM)

TM9-1300-206	Ammunition and Explosives Standards
TM9-1370-203-20&P	Organizational Maintenance Manual (Including Repair Parts and Special Tools List) For Military Pyrotechnics
TM9-4940-497-13&P	Aviation Unit Maintenance and Aviation Intermediate Maintenance Manual (Including Repair Parts and Special Tools List) For Test Sets, Electronic Systems, M91 and M92
TM11-5865-263-12	Operator's and Aviation Unit Maintenance Manual (AVUM) for Countermeasures Sets AN/ALQ-156(V), (V)1, (V)2, (V)3
TM43-0158	Repair Maintenance Test Equipment
TM750-244-1-5	Procedures for the Destruction of Aircraft and Associated Equipment to Prevent Enemy Use
TM750-244-7	Procedures for Destruction of Equipment in Federal Supply Classifications 1000, 1005, 1010, 1015, 1020, 1025, 1030, 1055, 1090 and 1095 to Prevent Enemy Use
TB43-0123	Aviation Electronics Configuration Directory
TB43-180	Calibration and Repair Requirements for the Maintenance of Army Materiel
TB385-4	Safety Requirements for Maintenance to Electrical and Electronic Equipment
FORMS	
DA Form 2028	Recommended Changes to Publications and Blank Forms
DA Form 2028-2	Recommended Changes to Equipment Technical Manuals
DA Form 2404	Equipment Inspection and Maintenance Worksheet
SF Form 364	Report of Discrepancy (ROD)
SF Form 368	Quality Deficiency Report (Category II)

TM 9-1095-206-12&P

OTHER

AR 700-42 Classification, Reclassification, Maintenance, Issuance and Report-

ing of Maintenance Training Aircraft

CTA 8-100 Army Medical Department Expendable/Durable Items

CTA 50-970 Expendable/Durable Items (except Medical, Class V, Repair Parts,

and Heraldic Items)

DA PAM 738-751 Functional Users Manual for The Army Maintenance Management

System-Aviation (TAMMS-A)

FM 21-11 (TEST) First Aid for Soldiers

MIL-P-116 Methods of Preservation-Packaging

MIL-STD-12D Abbreviations for Use on Drawings, and in Specifications, Standards

and Technical Documents

MIL-STD-129H Marking for Shipping and Storage

MIL-STD-1460 Soldering of Electrical Connections and Printed Wiring Assemblies,

Procedures for

PPP-B-621 D Boxes, Wood, Nailed and Lock-Corner

PPP-C-850 Cushioning Material, Polystyrene Expanded, Resilient For Packag-

ing Uses)

SC-5180-91-CL-R13-HR Tool kit, electronic equipment, TK-101/G

SC-5180-91-CL-R07-HR Tool kit, electronic equipment, TK-105/G

APPENDIX B

MAINTENANCE ALLOCATION CHART

Section I. INTRODUCTION

B-1. MAINTENANCE ALLOCATION CHART

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

a. This maintenance allocation chart (MAC) assigns maintenance function in accordance with the three levels of maintenance concept for Army aviation. These maintenance levels (categories) - aviation unit maintenance (AVUM), aviation intermediate maintenance (AVIM), and depot maintenance - are depicted on the MAC as:

AVUM, which corresponds to an O code in the repair parts and special tools list (RPSTL)

AVIM, which corresponds to an F code in the repair parts and special tools list (RPSTL)

DEPOT, which corresponds to a D code in the repair parts and special tools list (RPSTL)

- b. The maintenance to be performed below depot and in the field is described as follows:
- (1) Aviation unit maintenance (AVUM) activities will be staffed and equipped to perform high frequency "on-aircraft" maintenance tasks required to retain or return aircraft systems to a serviceable condition. The maintenance capability of the AVUM will be governed by the maintenance allocation chart (MAC) and limited by the amount and complexity of ground support equipment (GSE), facilities required, authorized manning strength, and critical skills available. The range and quantity of authorized spare modules/components will be consistent with the mobility requirements dictated by the air mobility concept. (Assignments of maintenance tasks to divisional company size aviation units will consider the overall maintenance capability of the division, the requirement to conserve personnel and equipment resources, and air mobility requirements.)
- (a) Company size aviation units: Perform those tasks which consist primarily of preventive maintenance and maintenance repair and replacement functions associated with sustaining a high level of aircraft operational readiness. Perform maintenance inspections and servicing to include preflight, daily, intermediate, periodic (or phased), and special inspections as authorized by the MAC or higher headquarters. Identify the cause of equipment/system malfunctions using applicable technical manual troubleshooting instructions, built-in test equipment (BITE), installed aircraft instruments, or test, measurement, and diagnostic equipment (TMDE). Replace worn or damaged modules/components that do not require complex adjustments or system alinement and which can be removed/installed with available skills, tools, and ground support equipment. Perform operational and continuity checks and make minor repairs to the electrical system. Inspect, service and make operational, capacity, and pressure checks to hydraulic systems. Perform servicing, functional adjustments, and minor repair/replacement to the flight control, propulsion, power train, and fuel systems. Accomplish air frame repair that

MAINTENANCE ALLOCATION CHART (cont)

does not require extensive disassembly, jigging, or alinement. The manufacture of air frame parts will be limited to those items which can be fabricated with tools and equipment found in current air mobile tool and shop sets. Evacuate unserviceable modules/components and end items beyond the repair capability of AVUM to the supporting AVIM.

- (b) Less than company size aviation units: Aviation elements organic to brigade, group, battalion headquarters, and detachment size units are normally small and have less than ten aircraft assigned. Maintenance tasks performed by these units will be those which can be accomplished by the aircraft crew chief or assigned aircraft repairman and will normally be limited to preventive maintenance, inspections, servicing, spot painting, stop drilling, application of nonstress patches, minor adjustments, module/component fault diagnosis, and replacement of selected modules/components. Repair functions will normally be accomplished by the supporting AVIM unit.
- (2) Aviation intermediate maintenance (AVIM) provides mobile, responsive "onestop" maintenance support. (Maintenance functions which are not conducive to sustaining air mobility will be assigned to depot maintenance). AVIM may perform all maintenance functions authorized to be done at AVUM. Repair of equipment for return to user will emphasize support or operational readiness requirements. Authorized maintenance includes replacement and repair of modules/components and end items which can be accomplished efficiently with available skills, tools, and equipment. AVIM establishes the direct exchange (DX) program for AVUM units by repairing selected items for return to stock when such repairs cannot be accomplished at the AVUM level. The AVIM level inspects, troubleshoots, performs diagnostic tests, repairs, adjusts, calibrates, and alines aircraft system modules/components. AVIM units will have capability to determine the serviceability of specified modules/components removed prior to the expiration of the time between overhaul (TBO) or finite life. Module/component disassembly and repair will support the DX program and will normally be limited to tasks requiring cleaning and the replacement of seals, fittings, and items of common hardware. Provides quick response maintenance support, including aircraft recovery and air evacuation, on-the-job training, and technical assistance through the use of mobile maintenance contact teams. Maintains authorized operational readiness float aircraft. Provides collection and classification services for serviceable/unserviceable material. (The aircraft maintenance company within the maintenance battalion of a division will perform AVIM functions consistent with air mobility requirements and conservation of personnel and equipment resources. Additional intermediate maintenance support will be provided by the supporting nondivisional AVIM unit.)

B-2. USE OF THE MAINTENANCE ALLOCATION CHART (SECTION II)

The use of the maintenance allocation chart is explained as follows.

NOTE

Nomenclatures used throughout the MAC are approved item names. Those terms/nomenclatures expressed in parentheses are generic in nature and are not to be considered as official terminology.

- a. The maintenance allocation chart assigns maintenance functions to the lowest category of maintenance based on past experience and the following considerations:
 - (1) Skills available.
 - (2) Work time required.
 - (3) Tools and test equipment required and/or available.
- b. Only the lowest category of maintenance authorized to perform a maintenance function is indicated. If the lowest maintenance category cannot perform all tasks of any single maintenance function (e.g., test, repair), then the higher maintenance level(s) that can accomplish additional tasks will also be indicated.
- c. A maintenance function assigned to a maintenance category will automatically be authorized to be performed at any higher maintenance category.
- d. A maintenance function that cannot be performed at the assigned category of maintenance for any reason may be evacuated to the next higher maintenance category. Higher maintenance categories will perform the maintenance functions of lower maintenance categories when required or directed by the commander that has the authority to direct such tasking.
- e. The assignment of a maintenance function will not be construed as authorization to carry the related repair parts or spares in stock. Information to requisition or otherwise secure the necessary repair parts will be as specified in the associated repair parts and special tools list (RPSTL).
- f. Normally there will be no deviation from the assigned level of maintenance. In cases of operational necessity, maintenance functions assigned to a maintenance level may, on a one-time basis and at the request of the lower maintenance level, be specifically authorized by the maintenance officer of the level of maintenance to which the function is assigned. The special tools, equipment, etc. required by the lower level of maintenance to perform this function will be furnished by the maintenance level to which the function is assigned. This transfer of a maintenance function to a lower maintenance level does not relieve the higher maintenance level of the responsibility for the function. The higher level of maintenance will provide technical supervision and inspection of the function being performed at the lower level.
- g. Changes to the maintenance allocation chart will be based on continuing evaluation and analysis by responsible technical personnel and on reports received from field activities.

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B-3. MAINTENANCE FUNCTIONS

Maintenance functions will be limited to and defined as follows:

- a. Inspect. To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination (e.g., by sight, sound, or feel).
- b. Test. To verify serviceability by measuring the mechanical, pneumatic, hydraulic, or electrical characteristics of an item and comparing those characteristics with prescribed standards.
- Service. Operations required periodically to keep an item in proper operating condition, i.e., to clean (includes decontaminate, when required), to preserve, to drain, to paint, or to replenish fuel, lubricants, chemical fluids, or gases.
- d. Adjust. To maintain or regulate, within prescribed limits, by bringing into proper or exact position, or by setting the operating characteristics to specified parameters.
- e. Aline. To adjust specified variable elements of an item to bring about optimum or desired performance.
- f. Calibrate. To determine and cause corrections to be made or to be adjusted on instruments or test, measuring, and diagnostic equipments used in precision measurement. Consists of comparisons 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.
- g. Remove/Install. To remove and install the same item when reauired to perform service or-other maintenance functions. Install may be the act of emplacing, seating, or fixing into position a spare, repair part, or module (component or assembly) in a manner to allow the proper functioning of an equipment or system.
- h. Replace. To remove an unserviceable item and install a serviceable counterpart in its place. "Replace" is authorized by the MAC and is shown as the 3d position code of the SMR code.
- i. Repair. The application of maintenance services, including fault location/trouble-shooting, removal/installation, and disassembly/assembly procedures, and maintenance actions to identify troubles and restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.
- j. Overhaul. That maintenance effort (service/action) prescribed to restore an item to a completely serviceable/operational condition as required by maintenance standards in appropriate technical publications (i.e., DMWR). Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like new condition.
- k. Rebuild. Consists of those services/actions necessary for the restoration of unserviceable equipment to a like new condition in accordance with original manufacturing standards. Rebuild is the highest degree of materiel maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (hours/miles, etc.) considered in classifying Army equipment/components.

B-4. FUNCTIONAL GROUPS (COLUMNS 1 AND 2)

The functional groupings shown in the sample below identify maintenance significant components, assemblies, subassemblies, and modules with the next higher assembly.

GROUP NUMBER DESCRIPTION	GROUP NUMBER DESCRIPTION
04 POWERPLANT	0406 FUEL SYSTEM
401 ENGINE GENERAL Servicing, handling, inspection requirements, lubrication charts, overhaul and retirement schedules. External lines and hoses. (As applicable.)	Fuel control, fuel boost pump, governors, fuel filter assembly, sequence valve, fuel manifold, fuel nozzle, external lines and hoses.
402 COMPRESSOR SECTION (COLD SECTION MODULE) Rotor, blades, vanes, impeller, stators, inlet guide vanes, main frame, particle separator, bleed valve, bearings, seals, external lines and hoses.	O407 ELECTRICAL SYSTEM Electrical control units, exciters, thermocouples, ignition harness, electrical cables, history record, torque overspeed sensor, Np sensor, alternate stator, blowers.
0403 COMBUSTION SECTION (HOT SECTION MODULE) Liners, nozzles, stators, rotor, seals, couplings, blades.	O408 OIL SYSTEM Tanks, oil filter, oil cooler, lube and scavenge pumps, oil filter bypass sensor, external lines and hoses.
0404 POWER-TURBINE (POWER TURBINE MODULE) Nozzles, rotors, blades, exit guide vanes, exhaust frame, drive shaft, bearings, seals, external lines and hoses.	0409 DRIVE SYSTEM Reduction gear assembly, output shaft, seal, bearing.
0405 ACCESSORY GEAR BOX (ACCESSORY SECTION MODULE) Input and output gears, seals, chip detector, housings, drive shaft, bearings, seals.	0410 MISCELLANEOUS EQUIPMENT (As applicable.)

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B-5. MAINTENANCE FUNCTION (COLUMN 3)

Column 3 lists the functions to be performed on the items listed in column 2.

B-6. MAINTENANCE CATEGORIES AND WORK TIMES (COLUMN 4)

The maintenance categories (levels) AVUM, AVIM, and DEPOT are listed on the maintenance allocation chart with individual columns that include the work times for maintenance functions at each maintenance level. Work time presentations such as "0.1" indicate the average time it requires a maintenance level to perform a specified maintenance function. If a work time has not been established, the columnar presentation shall indicate" --.--." Maintenance levels higher than the level of maintenance indicated are authorized to perform the indicated function.

B-7. TOOLS AND TEST EQUIPMENT (COLUMN 5 AND SECTION III)

Common tool sets (not individual tools), special tools, test, and support equipment required to perform maintenance functions are listed alphabetically in section III with a reference number to permit cross-referencing to column 5 in the MAC. In addition, the maintenance category authorized to use the device is listed along with the item National stock number (NSN) and, if applicable, the tool number to aid in identifying the tool/device.

B-8. REMARKS (COLUMN 6 AND SECTION IV)

Remarks (identified by an alphabetic code in column 6) and other notes (identified by a number in parentheses in the applicable column) are listed in section IV to provide a ready reference to the definition of the remark/note.

Section II. MAINTENANCE ALLOCATION CHART

NOMENCLATURE OF END ITEMS

M130 General Purpose Aircraft Dispenser

(1) Group	(2)	(3) Maintenance	(4) Maintenance Category			(5) Tools And	(6)	
Number	Component/Assemby	Function	AVUM	AVIM	DEPOT	Eqpt	Remark	
00	M130 General	Inspect	0.3					
	Purpose	Test	0.3				1,3,4	
	Aircraft	Remove	0.2					
	Dispenser	Install	0.2				5,6	
	9311430	Repair	0.5				5,6	
01	Cartridge Container	Inspect	0.2					
	(Payload Module	Replace	0.6				5,6	
	Assembly) 9311451	Repair	0.6				5,6	
0101	Retaining Plate	Replace	0.1				5	
	9311478	Repair	0.1				5	

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(1) Group	(2)	(3) Maintenance	(4) Maintenance Category		(5) Tools And	(6)	
Number	Component/Assemby				Eqpt	Remark	
02	Dispenser Assembly 9311434	Inspect Test Replace	0.2 0.2 0.2	0.3		1,2,4,5,6 5,6	
0201	Dispenser Breech 9311437	Repair Inspect Test Replace Repair	0.2	0.9 0.3 0.3 0.5		5,6 5,6 1,4,5,6 5,6 5,6	
0202	Sequencer Assembly 9311443	Test Replace Repair		0.3 1.0 1.5		1,2,4,5,6 5,6 5,6	
03	Program Control Box (Electronics Module Assembly) 9311431	Inspect Test Replace Repair	0.2 0.2 0.2	0.3		1,2,4,5,6 5,6 5,6	
0301	Module Programmer 9311429	Test Replace Repair		0.3 0.3 1.0		1,2,4,5,6 5,6 5,6	
04	Dispenser Control Box (Dispenser Control Panel Assembly) 9272533	Inspect Test Replace Repair	0.2 0.5 0.1 0.5	0.5		1,2,4,5,6 5,6 5,6	
0401	Front and Rear Panel Assembly 9321318	Replace Repair	0.7 0.5	0.5		5,6 1,5,6	

M130 GENERAL PURPOSE AIRCRAFT DISPENSER

TOOL OR TEST EQUIPMENT REFERENCE CODE	MAINTENANCE CATEGORY	NOMENCLATURE	NATIONAL/NATO STOCK NUMBER	TOOL NUMBER
1	O,F	MULTIMETER AN/PSM 45A OR EQUIVALENT	6625-01-265-6000	
2	F	OSCILLOSCOPE OS-288/G OR EQUIVALENT	6625-01-272-8054	
3	0	TEST SET, ELECTRONIC SYSTEMS: M91	4940-01-049-0828	
4	O,F	TEST SET, ELECTRONIC SYSTEMS: M92	4940-01-048-9677	
5	0	TOOL KIT, ELECTRONIC, TK-101/G	5180-00-064-5178	
6	F	TOOL KIT, ELECTRONIC, TK-105/G	5180-00-610-8177	

APPENDIX C OPERATOR'S AND AVIATION UNIT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST

Section I. INTRODUCTION

C-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 Operator's aviation unit maintenance of the M130 general purpose dispenser. It authorizes the requisitioning, issue, and disposition of spares, repair parts and special tools as indicated by the source, maintenance and recoverability (SMR) codes.

C-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. 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 by item name in FIG BULK at the end of the section. Repair parts kits or sets are listed separately in their own functional group within section II. Repair parts for repairable special tools are also listed in this section.
- 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 (UOC) column) for the performance of maintenance.
- c. Section IV. Cross-Reference Indexes. A list, in National item identification number (NIIN) sequence, of all National stock numbered items appearing in the listings, 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 numbers in alphanumeric sequence and cross-references NSN, FSCM, and part numbers.

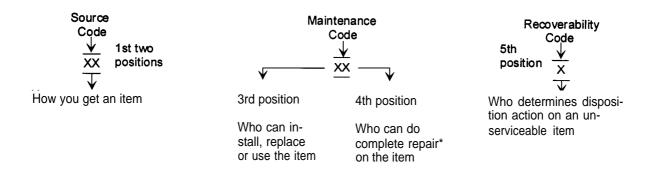
C-3. EXPLANATION OF COLUMNS (SECTIONS II AND III)

The columns in sections II and III are explained as follows.

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

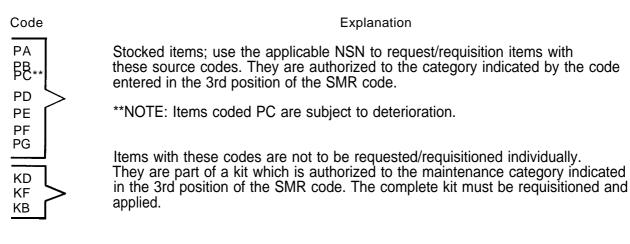
C-3. EXPLANATION OF COLUMNS (SECTIONS II AND III) (cont)

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:



^{*}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

MO - (Made at AVUM Level) MF - (Made at AVIM Level)

ML - (Made at Specialized Repair Act (SRA))

MD - (Made at Depot)

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 this RPSTL. If the item is authorized to you by the 3rd 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.

Code Explanation

AO - (Assembled by AVUM Level)

AF - (Assembled by AVIM Level)

AL - (Assembled by SRA)

AD - (Assembled by Depot)

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 is assembled at a higher level, order the item from the higher level of maintenance.

- 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.
- 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 700-42.

- (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
С	-Crew or operator maintenance done within organizational or aviation unit maintenance.
0	-Aviation unit category can remove, replace, and use the item.
F	-Aviation intermediate 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.

C-3. EXPLANATION OF COLUMNS (SECTIONS II AND III) (cont)

(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 O	Application/Explanation -Aviation unit is the lowest level that can do complete repair of the item.
F	-Aviation intermediate 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.
В	-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 3rd position of SMR Code.
0	-Reparable item. When uneconomically reparable, condemn and dispose of the item at aviation unit level.
F	-Reparable item. When uneconomically reparable, condemn and dispose of the item at the aviation intermediate level.

Recoverability Codes	Application/Explanation
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).
Α	-Item requires special handling or condemnation procedures be- cause 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 which is a physical security classification abbreviation (e.g., Phy Sec CI (C) 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.

C-3. EXPLANATION OF COLUMNS (SECTIONS II AND III) (cont)

- (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 equipment 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.
- 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 the quantity may vary from application to application.

C-4. EXPLANATION OF COLUMNS (SECTION IV).

The columns in section IV are explained as follows.

- 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 NSN
- (i.e., 5305-01-674-1467). When using this column to locate an item, ignore the first 4 NIIN

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.
- a. 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).
- (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.
- (6) 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.

- (7) Fig. Column. This column lists the number of the figure where the item is identified/located in sections II and III.
- (8) 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.
 - c. Figure and kern 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.

C-5. SPECIAL INFORMATION

Assembly Instruction. Detailed assembly instructions for items source coded to be assembled from component spare/repair parts are found in the appropriate maintenance paragraph of this manual. Items that make up the assembly are listed immediately following the assembly item entry or reference is made to an applicable figure.

C-6. HOW TO LOCATE REPAIR PARTS

Information on locating repair parts is as follows.

- 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 use the Figure and Item Number Index to find the NSN.

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C-6. HOW TO LOCATE REPAIR PARTS (cont)

- b. When National Stock Number or Part Number is Known.
- (1) First. Using the National stock number or the part number index, find the pertinent National stock number or part number. The NSN index is in National item identification number (NIIN) sequence. (See 4a(I).) 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. Turn to the figure and item number, verify that the item is the one you're looking for, then locate the item number in the repair parts list for the figure.

C-7. ABBREVIATIONS

Not applicable.

Section II. REPAIR PARTS LIST

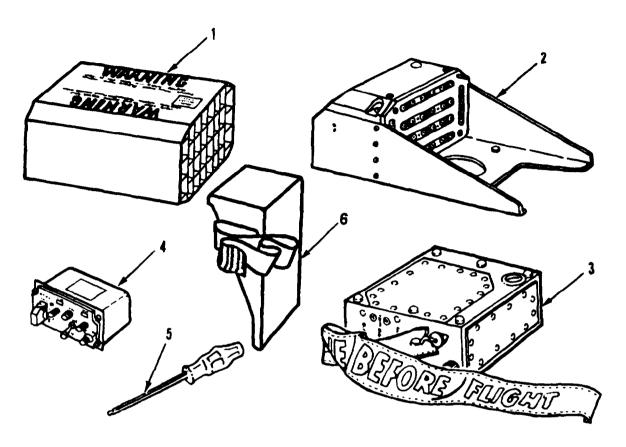


Figure C-1. M130 General Purpose Aircraft Dispenser 9311430.

(1)	(2)	(3)	(4)	(5)	(6)
ITEM NO	SMR CODE	FSCM	PART NUMBER	DESCRIPTION AND USABLE ON CODES(UOC)	QTY
				GROUP 00 FIG. C-1 M130 GENERAL PURPOSE AIRCRAFT DISPENSER 9311430	
1	PA000	19203	9311451	CONTAINER, CARTRIDGE (SEE FIG. C-2 FOR ASSY BKDN)	1
2	PAOFF	19203	9311434	DISPENSER ASSEMBLY (SEE FIG. C4 FOR ASSY BKDN)	1
3	PAOFF	19203	9311431	CONTROL BOX,PROGRAM (SEE FIG. C-7 FOR ASSY BKDN)	1
4	PAOFF	19203	9272533	CONTROL BOX, DISPENS (SEE FIG. C-9 FOR ASSY BKDN)	1
5	PAOZZ	19200	9326701	KEY,SOCKET HEAD SCREWDRIVER, BALL HEX KEY HEAD	1
6	PAOZZ	02731	7-262120029	COVER, ACCESS, PROTECTIVE	1

END OF FIGURE

SECTION II

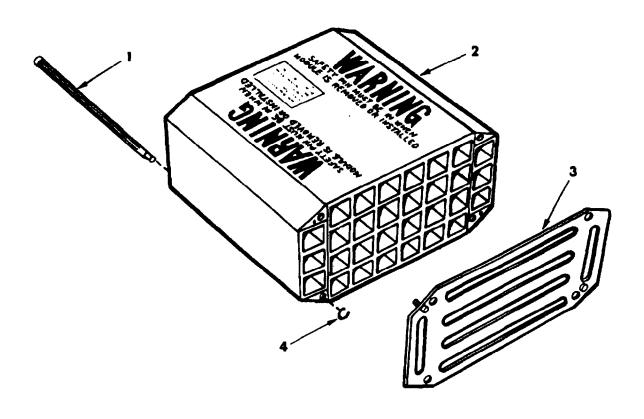


Figure C-2. Cartridge Container 9311451.

(1)	(2)	(3)	(4)	(5)	(6)
ITEM NO	SMR CODE	FSCM	PART NUMBER	DESCRIPTION AND USABLE ON CODES(UOC)	QTY
				GROUP 01 FIG. C-2 CARTRIDGE CONTAINER 9311451 SEE FIG. C-I FOR NHA)	
1 2 3	PAOZZ XAOZZ PAOOO PAOZZ	19203 19200 19203 96906	9311505 9335632 9311478 MS166321025	STUD NUT PAYLOAD MODULE PLATE, RETAINING (SEE FIG. C-3 FOR ASSY BKDN) RING RETAINING	2

END OF FIGURE

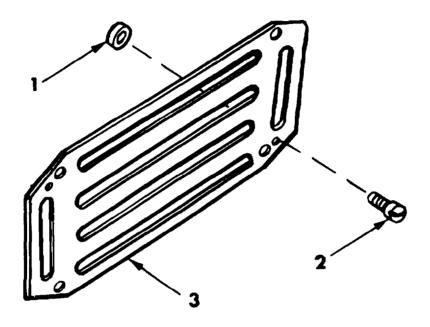


Figure C-3. Retaining Plate 9311478.

(1)	(2)	(3)	(4)	(5)	(6)
ITEM NO	SMR CODE	FSCM	PART NUMBER	DESCRIPTION AND USABLE ON CODES(UOC)	QTY
				GROUP 0101 FIG. C-3 RETAINING PLATE 9311478 (SEE FIG. C-2 FOR NHA)	
1 2 3	PAOZZ PAOZZ XAOZZ		9378454 MS35275-230 9311446	NUT, PLAIN ROUND SCREW,MACHINE PLATE RETAINING	2 2 1
				END OF FIGURE	

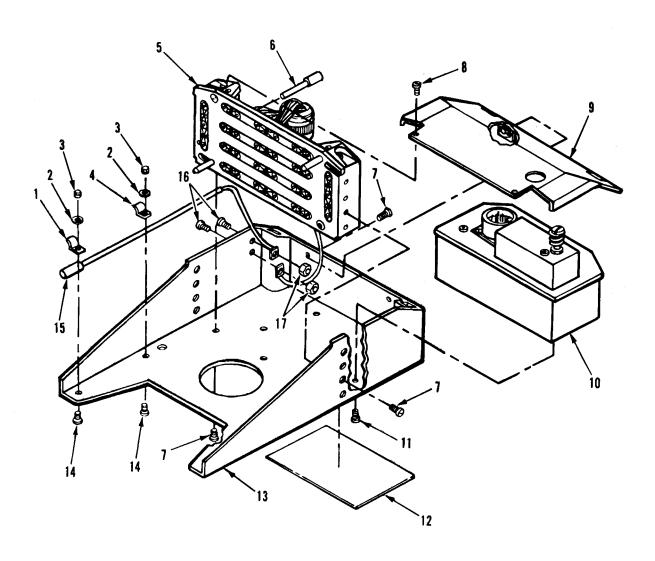


Figure C-4. Dispenser Assembly 9311434.

SECTION II				TM9-1095-206-12&P		
(1) ITEM	(2) SMR	(3)	(4) PART	(5)	(6)	
NO	CODE	FSCM	NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	QTY	
				GROUP 02 FIG. C-4 DISPENSER ASSEMBLY 9311434		
				(SEE FIG.C-1 FOR NHA)		
1	PAFZZ		9311685	STRAP, RETAINING	1	
2	PAFZZ	81352	AN960C4L	WASHER, FLAT	2	
3	PAFZZ	96906	MS21043-04	NUT, SELF-LOCKING, EX	2	
4	PAFZZ	19203	9311689	STRAP, RETAINING	1	
5	XAFFF	19203	9311437	BREECH, DISPENSER (SEE FIG.C-5 FOR		
				ASSY BKDN)	1	
6	XAFZZ	19200	9311424	PLUNGER, RESET: SWITCH	1	
7	PAFZZ	96906	MS24693C49	SCREW, MACHINE	13	
8	PAFZZ	96906	MS51957-43	SCREW, MACHINE	2	
9	PAFZZ	19203	9311426	COVER, ACCESS	1	
10	XAFFF	19200	9311443	SEQUENCER ASSEMBLY: (SEE FIG.C-6		
				FOR ASSY BKDN)	1	
11	PAFZZ	96906	MS24693C47	SCREW, MACHINE	4	
12	MDFZZ	19203	9311690	PLATE IDENTIFICATION	1	
13	XAFZZ	19203	9311427	MOUNTING PLATE	1	
14	PAFZZ	96906	MS51959-15	SCREW, MACHINE	2	
15	PAFZZ	19203	9311494	FLARE SENSOR ASSEMBLY	1	
16	PAFZZ	96906	MS51959-17	SCREW, MACHINE	2	
17	PAFZZ	96906	MS21044C04	NUT, SELF-LOCKING, HE	2	

END OF FIGURE

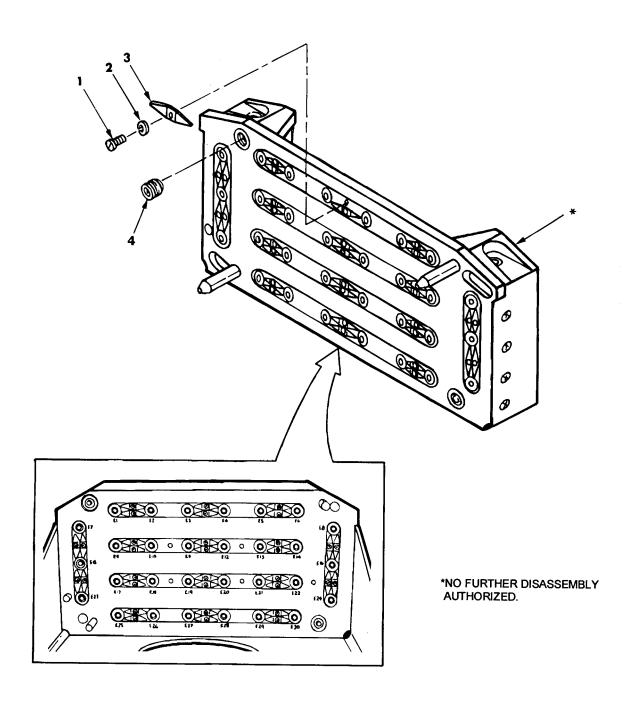


Figure C-5. Dispenser Breech 9311437.

SECTION II				TM9-1095-206-12&P		
(1) ITEM	(2) SMR	(3)	(4) PART	(5)	(6)	
NO	CODE	FSCM	NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	QTY	
				GROUP 0201 FIG. C-5 DISPENSER BREECH 9311437 (SEE FIG. C-4 FOR NHA)		
1 2	PAOZZ PAOZZ	96906 96906	MS51957-2 MS35338-134	SCREW, MACHINE WASHER	32 32	
3	PAOZZ PAFZZ	19203 19200	9311516 9311540	SPRING, FLAT RECEPTACLE, TURNLOCK	32 2	

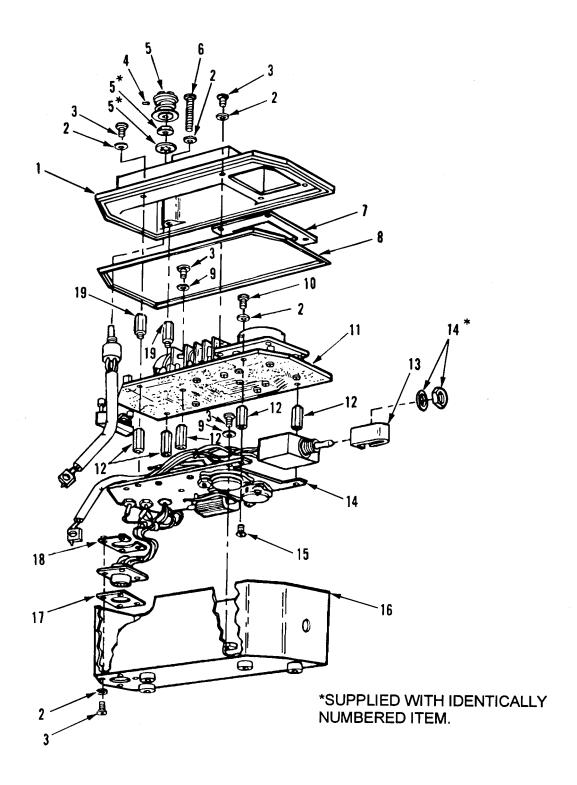


Figure C-6. Sequencer Assembly 9311443.

SECTION II				TM9-1095-206-12&P		
(1) ITEM	(2) SMR	(3)	(4) PART	(5)	(6)	
NO	CODE	FSCM	NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	QTY	
				GROUP 0202		
				FIG. C-6 SEQUENCER ASSEMBLY 9311443		
				(SEE FIG.C-4 FOR NHA)		
1	XAFZZ	19200	9311482	COVER, HOUSING: SEQUENCER	1	
2	PAFZZ	85480	LWNY-004BL	WASHER, FLAT	12	
3	PAFZZ	96906	MS51957-15	SCREW, MACHINE	15	
4	PAFZZ	96906	MS51021-101	SETSCREW	2	
5	PAFZZ	19203	9311691	KNOB, SEQUENCER	1	
6	PAFZZ	96906	MS51957-23	SCREW, MACHINE	1	
7	PAFZZ	19200	9311481	GASKET	1	
8	PAFZZ	19203	9311415	SEAL, NONMETALLIC CHANNEL	1	
9	PAFZZ	81352	AN960C4L	WASHER, FLAT	6	
10	PAFZZ	96906	MS51957-14	SCREW, MACHINE	2	
11	PAFZZ	19203	9311464	CIRCUIT CARD ASSEMBLY: SEQUENCER		
				SWITCH	1	
12	PAFZZ	80205	NAS1831-3B11	POST, ELECTRICAL	5	
13	PAFZZ	19200	9347355	CLIP, SPRING TENSION	1	
14	PAFZZ	19203	9311488	PLATE ASSEMBLY, SEQUENCER	1	
15	PAFZZ	96906	MS24693C4	SCREW, MACHINE	5	
16	XAFZZ	19200	9311484	HOUSING ASSMBLY: SEQUENCER	1	
17	PAFZZ	19200	9311570	GASKET	1	
18	PAFZZ	19200	9311605-1	PLATE, RETAINING, ELE	1	
19	PAFZZ	19203	9311568	POST, ELECTRICAL	2	

END OF FIGURE

C-17

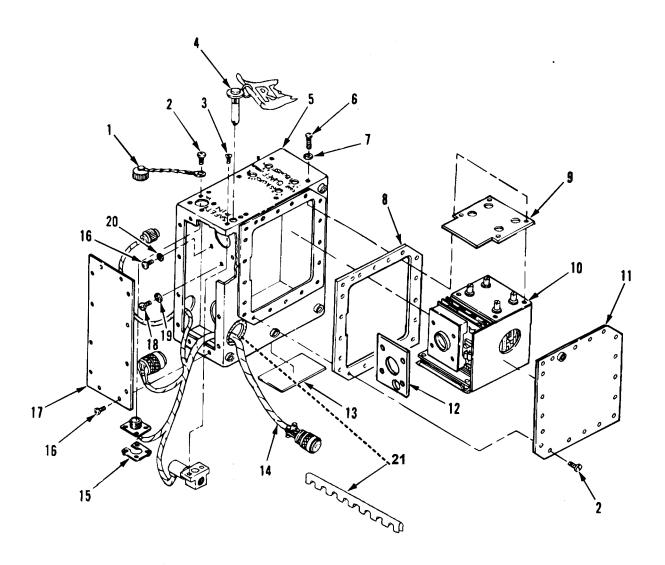


Figure C-7. Program Control Box 9311431

SECTION II				TM9-1095-206-12&P		
(1) ITEM	(2) SMR	(3)	(4) PART	(5)	(6)	
NO	CODE	FSCM	NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	QTY	
				GROUP 03		
				FIG. C-7 PROGRAM CONTROL BOX 9311431		
				(SEE FIG.C-1 FOR NHA)		
1	PAFZZ	96906	MS25043-12DA	COVER, ELECTRICAL CONNECTOR	1	
2	PAFZZ	96906	MS51957-15	SCREW, MACHINE	22	
3	PAFZZ	96906	MS24693C24	SCREW, MACHINE	2	
4	PAOZZ	19203	9311511	PIN, GROUND SAFETY	1	
5	PAFZZ	19200	9311477	HOUSING ASSEMBLY, ELECTRONICS		
				MODULE	1	
6	PAFZZ	96906	MS51957-35	SCREW, MACHINE	6	
7	PAFZZ		2515	WASHER, FLAT	6	
8	PAFZZ		9311563	GASKET	1	
9	PAFZZ		9311475	GASKET	1	
10	AFFFF	19200	9311429	PROGRAMMER, MODULE: (SEE FIG.C-8		
				FOR ASSY BKDN)	1	
11	PAFZZ	19200	9311695	COVER, ACCESS	1	
12	PAFZZ		9311694	GASKET: HEAT SINK	1	
13	MDFZZ	19203	9311509	PLATE, IDENTIFICATION	1	
14	PAFZZ	19203	9311611	WIRING HARNESS, BRANCHED:	1	
15	PAFZZ	19200	9311605-2	PLATE, RETAINING	1	
16	PAFZZ		MS51957-14	SCREW, MACHINE	16	
17	PAFZZ	19200	9311420	COVER, ACCESS FRONT HOUSING	1	
18	PAFZZ	96906	MS51957-45	SCREW, MACHINE	1	
19	PAFZZ	80205	NAS1515-H08	WASHER, FLAT	1	
20	PAFZZ		575326-1	WASHER, FLAT	4	
21	PAFZZ	03296	G51HA1-5-8	GROMMET, NONMETALIC	2	

END OF FIGURE

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SECTION II

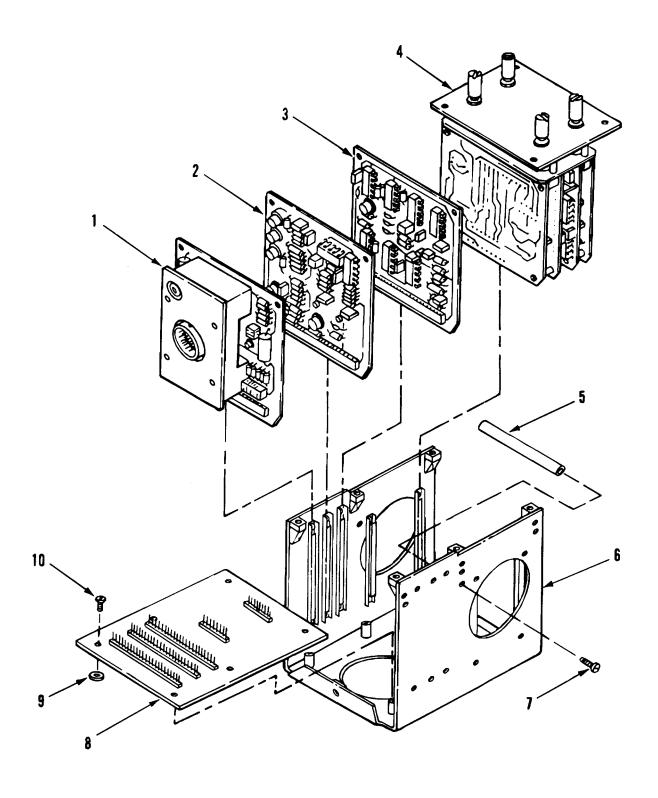


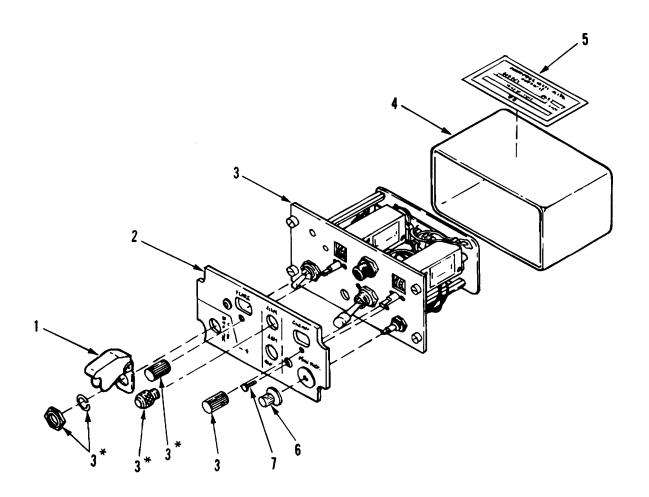
Figure C-8. Module Programmer 9311429

SECTION II				TM9-1095-206-12&P		
(1) ITEM	(2) SMR	(3)	(4) PART	(5)	(6)	
NO	CODE	FSCM	NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	QTY	
				GROUP 0301 FIG. C-8 MODULE PROGRAMMER 9311429 (SEE FIG.C-7 FOR NHA)		
1	PAFZZ	19203	9311452	CIRCUIT CARD ASSEMBLY: POWER SUPPLY NO. 1	1	
2	PAFZZ	19203	9311455	CIRCUIT CARD ASSEMBLY: POWER SUPPLY NO. 2	1	
3	PAFZZ	19203	9311458	CIRCUIT CARD ASSEMBLY: FLARE DETECTOR	1	
4	PAFZZ	19203	9311473	PROGRAMMER, CHAFF	1	
5	PAFZZ	19203	9311417	POST, ELECTRICAL	1	
6	PAFZZ	19203	9311474	CHASSIS, ELECTRICAL PROGRAMMER	1	
7	PAFZZ	96906	MS51957-26	SCREW, MACHINE	2	
8	PAFZZ	19203	9311461	CIRCUIT CARD ASSY, INTERCONNECT	1	
9	PAFZZ	13393	5753326-1	WASHER, FLAT	6	
10	PAFZZ	96906	MS51957-14	SCREW, MACHINE	6	

END OF FIGURE

C-21

SECTION II



*SUPPLIED WITH IDENTICALLY NUMBERED ITEM.

Figure C-9. Dispenser Control Box 9272533.

SECTION II				TM9-1095-206-12&P		
(1) ITEM	(2) SMR	(3)	(4) PART	(5)	(6)	
NO	CODE	FSCM	NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	QTY	
				GROUP 04 FIG. C-9 DISPENSER CONTROL BOX 9272533 (SEE FIG.C-1 FOR NHA)		
1	PAOZZ	96906	MS25224-1	GUARD, SWITCH TWO-POSITION	1	
2	PAFZZ	19200	12597636	PANEL, INDICATING, LIGHT	1	
3	XAFFF	19200	9321318	TRANSMITTING FRONT AND REAR PANEL ASSEMBLY (SEE FIG.C-10 FOR ASSY BKDN)	1	
4	PAFZZ	19203	9321326	COVER, ACCESS	1	
5	MDFZZ	19203	9310959	PLATE, ID	1	
6	PAOZZ	19200	9310970	KNOB	1	
7	PAFZZ	96906	MS35206-231	SCREW, MACHINE	2	

END OF FIGURE

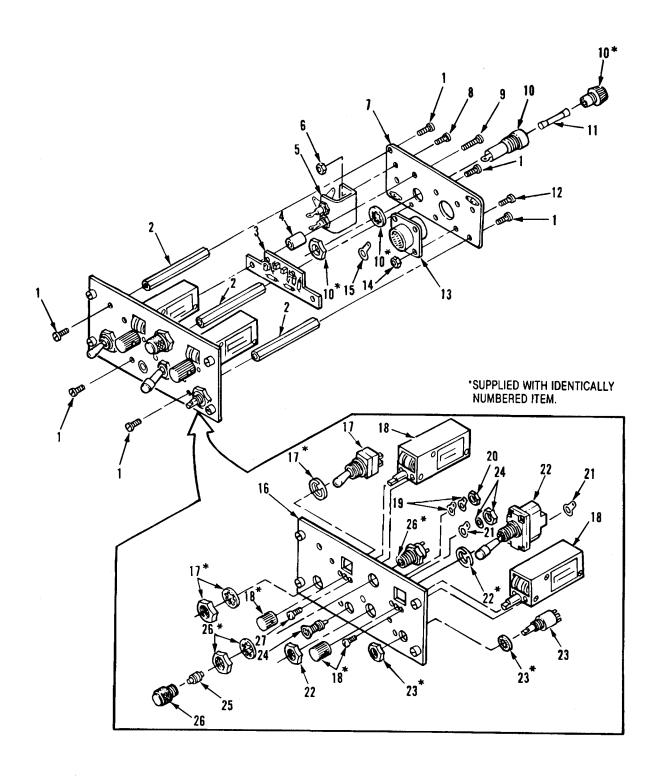


Figure C-10. Front and Rear Panel Assembly 9321318.

SECTION II TM9-1095-206-12&P

(1) (2) (3) (4)

ITEM	SMR		PART		
NO	CODE	FSCM	NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	QTY
				GROUP 0401	
				FIG. C-10 FRONT AND REAR PANEL	
				ASSEMBLY 9321318	
				(SEE FIG.C-9 FOR NHA)	
1	PAFZZ	96906	MS21093-0621	SCREW, SELF-LOCKING	6
2	PAFZZ	19203		POST, ELECTRICAL	3
3	PAFZZ	19203	9313670	CIRCUIT CARD ASSEMBLY, COUNTER	3
3	PAFZZ	19203	9313070	BUFFER ASSEMBLY	1
4	PAFZZ	19203	9313883	POST, ELECTRICAL	2
5	PAFZZ	19203	9311297	SEMICONDUCTOR DEVIC ASSEMBLY:	1
6	PAFZZ	96906	M535649-262	NUT, PLAIN, HEXAGON	2
7	XAFZZ	19200	9310968	REAR PANEL ASSEMBLY:	1
8	PAFZZ	96906	MS21093-0620	SCREW, SELF-LOCKING	2
9	PAFZZ	96906	MS21093-0618	SCREW, SELF-LOCKING	2
10	PAFZZ	81349	FHN26GI	FUSEHOLDER, EXTRACTOR POST	1
11	PAOZZ	81349	F02B32V15A	FUSE, CARTRIDGE	1
12	PAFZZ	96906	MS21093-0410	SCREW, SELF-LOCKING	4
13	PAFZZ	96906	MS3472W14-19P	CONNECTOR, RECEPTACLE: J1	1
14	PAFZZ	96906	MS35649-242	NUT, PLAIN, HEXAGON	4
15	PAFZZ	96906	MS577068-1	TERMINAL, LUG	1
16	XAFZZ	19200	9310969	FRONT PANEL ASSEMBLY:	1
17	PAFZZ	96906	MS90310-231	SWITCH, TOGGLE:S2	1
18	PAFZZ	19203	9310953	COUNTER, ELECTRICAL:M1,M2	2
19	PAFZZ	96906	MS77068-2	TERMINAL, LUG	4
20	PAFZZ	96906	MS21044-N06	NUT, SELF-LOCKING, HE	1
21	PAFZZ	96906	MS0035431-10	TERMINAL, LUG	1
22	PAFZZ	96906	MS24658-22D	SWITCH, TOGGLE:S3	1
23	PAFZZ	19203	9321211-1	SWITCH, ROTARY: S1	1
24	PAFZZ	96906	MS90335-1	CONNECTOR, RECEPTACLE: J2	1
25	PAOZZ	96906	MS25237-327AS15	LAMP, INCANDESCENT	4
26	PAOZZ	19200	1256373	LIGHT, INDICATOR	4
27	PAFZZ	96906	MS21093-0409	SCREW, SELF-LOCKING	4
				•	

(5)

(6)

END OF FIGURE

Section III. SPECIAL TOOLS LIST

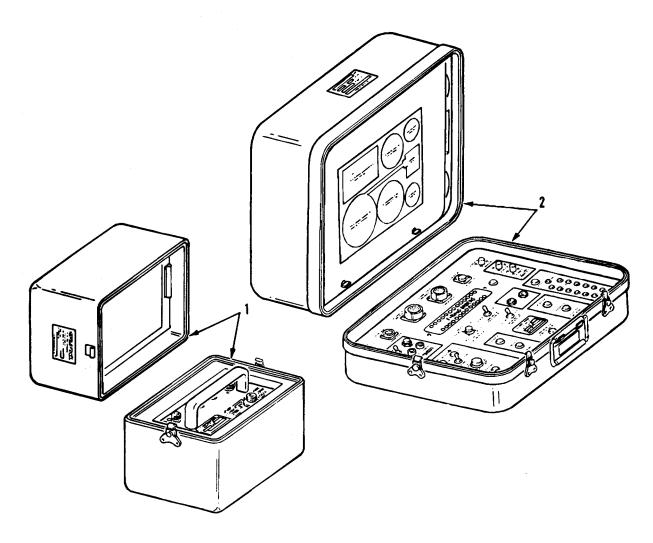


Figure C-11. Special Tools and Equipment.

(1)	(2)	(3)	(4)	(5)	(6)
ITEM NO	SMR CODE	FSCM	PART Number	DESCRIPTION AND USABLE ON CODES(UOC)	QTY
				GROUP 9500 FIG. C-11 SPECIAL TOOLS AND EQUIPMENT	
1,	PEOFF	19200	9325900	TEST SET, ELECTRONIC SYSTEMS M91 (TM 9-4940-497-13&F	
2	PEFFF	19200	9325901	TEST SET, ELECTRONIC SYSTEM M92	
				END OF FIGURE	

NATIONAL STOCK NUMBER	INDEX				
STOCK NUMBER	FIG.	ITEM	STOCK NUMBER	FIG.	ITEM
1095-01-056-6112	C-7	14	5305-00-869-9582	C-10	8
1095-01-057-0026	C-1	1	5305-00-889-3001	C-9	7
1095-01-057-0027	C-1	3	5305-00-940-9491	C-3	2
1095-01-057-0042	C-6	14	5305-01-043-7710	C-6	4
1095-01-057-0043	C-8	2	5310-00-081-8087	C-10	20
1095-01-057-4592	C-1	4	5310-00-470-5458	C-6	2
1095-01-057-6947	C-2	3	5310-00-595-6425	C-4	2
1095-01-058-8966	C-8	4	5310-00-595-6425	C-6	9
1095-01-059-8329	C-8	1	5310-00-796-1117	C-7	7
1095-01-061-0892	C-6	11	5310-00-878-3292	C-4	3
1095-01-061-0893	C-10	3	5310-00-928-2690	C-5	2
1095-01-065-9028	C-1	2	5310-00-934-9739	C-10	14
1095-01-065-9414	C-4	5	5310-00-934-9747	C-10	6
1095-01-065-9621	C-8	3	5310-00-939-0571	C-7	19
1095-01-065-9833	C-2	1	5310-00-973-8660	C-7	20
1095-01-075-1967	C-6	5	5310-00-973-8660	C-8	9
1095-01-078-4003	C-9	4	5310-00-982-4999	C-4	17
1095-01-078-4540	C-4	9	5310-01-204-5929	C-3	1
1095-01-225-1157	C-7	5	5325-00-960-2410	C-1	6
1095-01-225-1216	C-7	17	5325-01-035-1979	C-5	4
1095-01-225-1217	C-7	11	5330-01-075-2908	C-7	9
1560-01-271-6463	C-7	21	5330-01-078-4507	C-7	12
1730-01-067-3673	C-7	4	5330-01-080-0044	C-6	8
4940-01-048-9677	C-11	2	5330-01-084-7070	C-7	8
4940-01-049-0828	C-11	1	5330-01-086-8596	C-6	7
5120-01-079-9644	C-1	5	5330-01-094-1584	C-6	17
5305-00-054-5636	C-5	1	5340-01-065-3725	C-4	1
5305-00-054-5648	C-6	10	5340-01-065-3726	C-4	4
5305-00-054-5648	C-7	16	5340-01-065-9639	C-10	2
5305-00-054-5648	C-8	10	5340-01-067-8324	C-10	4
5305-00-054-5649	C-6	3	5340-01-095-2390	C-6	19
5305-00-054-5649	C-7	2	5340-01-220-1774	C-6	13
5305-00-054-5657	C-6	6	5340-01-225-1213	C-8	5
5305-00-054-6650	C-8	7	5340-01-225-2745	C-6	12
5305-00-054-6659	C-7	6	5355-01-058-7678	C-9	6
5305-00-054-6668	C-4	8	5360-01-058-4394	C-5	3
5305-00-054-6670	C-7	18	5365-00-200-5234	C-2	4
5305-00-056-9961	C-6	15	5920-00-581-6126	C-10	11
5305-00-056-9962	C-4	11	5920-00-892-9311	C-10	10
5305-00-066-7326	C-7	3	5930-00-615-6731	C-9	1
5305-00-068-5287	C-4	7	5930-00-843-8990	C-10	22
5305-00-102-4558	C-10	9	5930-00-914-6458	C-10	17
5305-00-115-3031	C-10	27	5930-01-062-9808	C-10	23
5305-00-575-5964	C-10	1	5935-00-238-6419	C-7	1
5305-00-726-1239	C-10	12	5935-01-059-2456	C-8	8
5305-00-768-0336	C-4	16	5935-01-061-1483	C-10	24
5305-00-770-2579	C-4	14	5935-01-178-8476	C-7	15

NATIONAL STOCK NUMBER	INDEX (CON	Γ)			
STOCK NUMBER	FIG.	ITEM	STOCK NUMBER	FIG.	ITEM
5935-01-169-4144	C-10	13			
5935-01-198-7932	C-6	18			
5940-00-682-2477	C-10	15			
5940-00-827-2653	C-10	19			
5940-01-074-4475	C-10	21			
5961-01-225-1226	C-10	5			
5980-01-067-1656	C-4	15			
5999-01-227-5543	C-8	6			
6210-01-296-3384	C-9	2			
6210-01-302-6002	C-10	26			
6240-00-155-7836	C-10	25			
6680-01-065-6969	C-10	18			

PART	NUMBER	INDEX

	PART NUMBER INI	DEX		
FSCM	PART NUMBER	STOCK NUMBER	FIG.	ITEM
19200	12556373	6210-01-302-6002	C-10	26
19200	12597636	6210-01-296-3384	C-9	2
96967	2515	5310-00-796-1117	C-7	7
13393	575326-1	5310-00-973-8660	C-7	20
13393	575326-1	5310-00-973-8660	C-8	9
02731	7-262120029	1560-01-271-6463	C-1	6
19203	9272533	1095-01-057-4592	C-1	4
19203	9310953	6680-01-065-6969	C-10	18
19203	9310959		C-9	5
19200	9310968		C-10	7
19200	9310969		C-10	16
19200	9310970	5355-01-058-7678	C-9	6
19200	9311297	5961-01-225-1226	C-10	5
19203	9311415	5330-01-080-0044	C-6	8
19203	9311417	5340-01-225-1213	C-8	5
19200	9311420	1095-01-225-1216	1216	C-7
19200	9311424		C-4	6
19203	9311426	1095-01-078-4540	C-4	9
19203	9311427		C-4	13
19200	9311429		C-7	10
19203	9311431	1095-01-057-0027	C-1	3
19203	9311434	1095-01-065-9028	C-1	2
19203	9311437	1095-01-065-9414	C-4	5
19200	9311443		C-4	10
19203	9311446		C-3	3
19203	9311451	1095-01-057-0026	C-1	1
19203	9311452	1095-01-059-8329	C-8	1
19203	9311455	1095-01-057-0043	C-8	2
19203	9311458	1095-01-065-9621	C-8	3
19203	9311461	5935-01-059-2456	C-8	8
19203	9311464	1095-01-061-0892	C-6	11
19203	9311473	1095-01-058-8966	C-8	4
19203	9311474	5999-01-227-5543	C-8	6
19203	9311475	5330-01-075-2908	C-7	9
19200	9311477	1095-01-225-1157	C-7	5
19203	9311478	1095-01-057-6947	C-2	3
19200	9311481	5330-01-086-8596	C-6	7 1
19200 19200	9311482 9311484		C-6	16
19200	9311484	1095-01-057-0042	C-6 C-6	16
19203	9311494	5980-01-067-1656	C-4	15
19203	9311494	1095-01-065-9833	C-4	1
19203	9311509	1093-01-003-9833	C-2	13
19203	9311509	1730-01-067-3673	C-7	4
19203	9311511	5360-01-058-4394	C-7	3
19200	9311540	5325-01-035-1979	C-5	4
19203	9311563	5330-01-084-7070	C-7	8
19203	9311568	5340-01-095-2390	C-6	19
19200	9311570	5330-01-094-1584	C-6	17
19200	9311605-1	5935-01-198-7932	C-6	18

PART NU	MBER INDEX (CONT)			
FSCM	PART NUMBER	STOCK NUMBER	FIG.	ITEM
10000	0211605 0	F02F 01 060 004F	~ -	1.5
19200	9311605-2	5935-01-060-8845	C-7	15
19203	9311611	1095-01-056-6112	C-7	14
19203	9311685	5340-01-065-3725	C-4	1
19203	9311689	5340-01-065-3726	C-4	4
19203	9311690	1005 01 075 1067	C-4	12
19203	9311691	1095-01-075-1967	C-6	5
19203	9311694	5330-01-078-4507	C-7	12
19200	9311695	1095-01-225-1217	C-7	11
19203	9313670	1095-01-061-0893	C-10	3
19203	9313883	5340-01-067-8324	C-10	4
19203	9321211-1	5930-01-062-9808	C-10	23
19200	9321318	F240 01 06F 0620	C-9	3
19203	9321322	5340-01-065-9639	C-10	2
19203	9321326	1095-01-078-4003	C-9	4
19200	9325900	4940-01-049-0828	C-11	1
19200	9325901	4940-01-048-9677	C-11	2
19200	9326701	5120-01-079-9644	C-1	5
19200	9335632	5340-01-220-1774	C-2 C-6	2
19200	9347355			13
19203	9378454	5310-01-204-5929	C-3	1
81352	AN960C4L	5310-00-595-6425	C-4	2
81352	AN960C4L	5310-00-595-6425	C-6	9
81349	F02B32V15A	5920-00-581-6126	C-10	11
81349	FHN26GI	5920-00-892-9311	C-10	10
03296	G51HA1-5-8	1560-01-271-6463	C-7	21
85480	LWNY-004BL	5310-00-470-5458 5940-01-074-4475	C-6	2 21
96906 96906	MS0035431-10		C-10 C-2	4
96906	MS16632-1025 MS21043-04	5365-00-200-5234 5310-00-878-3292	C-2 C-4	3
96906	MS21043-04 MS21044-N06	5310-00-878-3292	C-10	20
96906	MS21044-N00	5310-00-081-8087	C-10	17
96906	MS21044C04 MS21093-0409	5305-00-115-3031	C-4 C-10	27
96906	MS21093-0409	5305-00-726-1239	C-10	12
96906	MS21093-0410 MS21093-0618	5305-00-720-1239	C-10	9
96906	MS21093-0620	5305-00-102-4550	C-10	8
96906	MS21093-0621	5305-00-505-5362	C-10	1
96906	MS24658-22D	5930-00-843-8990	C-10	22
96906	MS24693C24	5305-00-066-7326	C-7	3
96906	MS24693C4	5305-00-056-9961	C-6	15
96906	MS24693C47	5305-00-056-9962	C-4	11
96906	MS24693C49	5305-00-068-5287	C-4	7
96906	MS25043-I2DA	5935-00-238-6419	C-7	1
96906	MS25224-1	5930-00-615-6731	C-9	1
96906	MS25237-327AS15	6240-00-155-7836	C-10	25
96906	MS3472W14-19P	5935-01-169-4144	C-10	13
96906	MS35206-231	5305-00-889-3001	C-9	7
96906	MS35275-230	5305-00-940-9491	C-3	2
96906	MS35338-134	5310-00-928-2690	C-5	2
96906	MS35649-242	5310-00-934-9739	C-10	14
96906	MS35649-262	5310-00-934-9747	C-10	6
96906	MS51021-101	5305-01-043-7710	C-6	4
, 0 , 0 0	1.001021 101	3303 01 013 7710	0	-

PART NUM	MBER INDEX(CONT)			
FSCM	PART NUMBER	STOCK NUMBER	FIG.	ITEM
96906	MS51957-2	5305-00-054-5636	C-5	1
96906	MS51957-14	5305-00-054-5648	C-7	16
96906	MS51957-14	5305-00-054-5648	C-8	10
96906	MS51957-15	5305-00-054-5649	C-6	3
96906	MS51957-15	5305-00-054-5649	C-7	2
96906	MS51957-23	5305-00-054-5657	C-6	6
96906	MS51957-26	5305-00-054-6650	C-8	7
96906	MS51957-35	5305-00-054-6659	C-7	6
96906	MS51957-43	5305-00-054-6668	C-4	8
96906	MS51957-45	5305-00-054-6670	C-7	18
96906	MS51959-15	5305-00-770-2579	C-4	14
96906	MS51959-17	5305-00-768-0336	C-4	16
96906	MS77068-1	5940-00-682-2477	C-10	15
96906	MS77068-2	5940-00-827-2653	C-10	19
96906	MS90310-231	5930-00-914-6458	C-10	17
96906	MS90335-1	5935-01-061-1483	C-10	24
80205	NAS1515-H08	5310-00-939-0571	C-7	19
80205	NAS1831-3B11	5340-01-225-2745	C-6	12

FIGURE AND ITEM NUMBER INDEX

FIG.	ITEM	STOCK NUMBER	FSCM	PART NUMBER
C-1	1	1095-01-057-0026	19203	9311451
C-1	2	1095-01-065-9028	19203	9311434
C-1	3	1095-01-057-0027	19203	9311431
C-1	4	1095-01-057-4592	19203	9272533
C-1	5	5120-01-079-9644	19200	9326701
C-1	6	5325-00-960-2410	02731	7-262120029
C-2	1	1095-01-065-9833	19203	9311505
C-2	2		19200	9335632
C-2	3	1095-01-057-6947	19203	9311478
C-2	4	5365-00-200-5234	96906	MS16632-1025
C-3	1	5310-01-204-5929	19203	9378454
C-3	2	5305-00-940-9491	96906	MS35275-230
C-3	3	3303 00 310 3131	19203	9311446
C-4	1	5340-01-065-3725	19203	9311685
C-4	2	5310-00-595-6425	81352	AN960C4L
C-4	3	5310-00-878-3292	96906	MS21043-04
C-4	4	5340-01-065-3726	19203	9311689
C-4	5	1095-01-065-9414	19203	9311437
C-4	6	1030 01 000 3111	19200	9311424
C-4	7	5305-00-068-5287	96906	MS24693C49
C-4	8	5305-00-054-6668	96906	MS51957-43
C-4	9	1095-01-078-4540	19203	9311426
C-4	10	1033 01 070 1310	19200	9311443
C-4	11	5305-00-056-9962	96906	MS24693C47
C-4	12	3303 00 030 3302	19203	9311690
C-4	13		19203	9311427
C-4	14	5305-00-770-2579	96906	MS51959-15
C-4	15	5980-01-067-1656	19203	9311494
C-4	16	5305-00-768-0336	96906	MS51959-17
C-4	17	5310-00-982-4999	96906	MS21044C04
C-5	1	5305-00-054-5636	96906	MS51957-2
C-5	2	5310-00-928-2690	96906	MS35338-134
C-5	3	5360-01-058-4394	19203	9311516
C-5	4	5325-01-035-1979	19200	9311540
C-6	1		19200	9311482
C-6	2	5310-00-470-5458	85480	LWNY-004BL
C-6	3	5305-00-054-5649	96906	MS51957-15
C-6	4	5305-01-043-7710	96906	MS51021-101
C-6	5	1095-01-075-1967	19203	9311691
C-6	6	5305-00-054-5657	96906	MS51957-23
C-6	7	5330-01-086-8596	19200	9311481
C-6	8	5330-01-080-0044	19203	9311415
C-6	9	5310-00-595-6425	81352	AN960C4L
C-6	10	5305-00-054-5648	96906	MS51957-14
C-6	11	1095-01-061-0892	19203	9311464
C-6	12	5340-01-225-2745	80205	NAS1831-3B11
C-6	13	5340-01-220-1774	19200	9347355
C-6	14	1095-01-057-0042	19203	9311488
C-6	15	5305-00-056-9961	96906	MS24693C4
C-6	16		19200	9311484
C-6	17	5330-01-094-1584	19200	9311570

FIGURE	AND ITEM	NUMBER INDEX(CONT)		
FIG.	ITEM	STOCK NUMBER	FSCM	PART NUMBER
C-6	18	5935-01-198-7932	19200	9311605-1
C-6	19	5340-01-095-2390	19203	9311568
C-7	1	5935-00-238-6419	96906	MS25043-I2DA
C-7	2	5305-00-258-0419	96906	MS51957-15
C-7	3	5305-00-054-3049	96906	MS24693C24
C-7	4	1730-01-067-3673	19203	9311511
C-7	5	1095-01-225-1157	19200	9311477
C-7	6	5305-00-054-6659	96906	M551957-35
C-7	7	5310-00-796-1117	96967	2515
C-7	8	5330-01-084-7070	19203	9311563
C-7	9	5330-01-034-7070	19203	9311475
C-7	10	3330 01 073 2300	19200	9311429
C-7	11	1095-01-225-1217	19200	9311429
C-7	12	5330-01-078-4507	19203	9311694
C-7	13	3330-01-070-4307	19203	9311509
C-7	14	1095-01-056-6112	19203	9311611
C-7	15	5935-01-060-8845	19200	9311605-2
C-7	16	5305-00-054-5648	96906	MS51957-14
C-7	17	1095-01-225-1216	19200	9311420
C-7	18	5305-00-054-6670	96906	MS51957-45
C-7	19	5310-00-939-0571	80205	NAS1515-H08
C-7	20	5310-00-939-0371	13393	575326-1
C-7	21	1560-01-271-6463	03296	G51HA1-5-8
C-8	1	1095-01-059-8329	19203	9311452
C-8	2	1095-01-059-0329	19203	9311455
C-8	3	1095-01-057-0045	19203	9311458
C-8	4	1095-01-005-9021	19203	9311473
C-8	5	5340-01-225-1213	19203	9311417
C-8	6	5999-01-227-5543	19203	9311417
C-8	7	5305-00-054-6650	96906	MS51957-26
C-8	8	5935-01-059-2456	19203	9311461
C-8	9	5310-00-973-8660	13393	575326-1
C-8	10	5305-00-054-5648	96906	MS51957-14
C-9	1	5930-00-615-6731	96906	MS25224-1
C-9	2	6210-01-296-3383	19200	12597636
C-9	3	0210 01 200 3303	19200	9321318
C-9	4	1095-01-078-4003	19203	9321326
C-9	5	1000 01 070 1000	19203	9310959
C-9	6	5355-01-058-7678	19200	9310970
C-9	7	5305-00-889-3004	96906	MS35206-231
C-10	1	5305-00-575-5964	96906	MS21093-0621
C-10	2	5340-01-065-9639	19203	9321322
C-10	3	1095-01-061-0893	19203	9313670
C-10	4	5340-01-067-8324	19203	9313883
C-10	5	5961-01-225-1226	19200	9311297
C-10	6	5310-00-934-9747	96906	MS35649-262
C-10	7		19200	9310968
C-10		5305-00-869-9582	96906	MS21093-0620
C-10	9	5305-00-102-4558	96906	MS21093-0618
C-10	10	5920-00-892-9311	81349	FHN26GI
C-10	11	5920-00-581-6126	81349	F02B32V15A
C-10	12	5305-00-726-1239	96906	MS21093-0410

FIGURE	AND ITEM	NUMBER INDEX(CONT)		
FIG.	ITEM	STOCK NUMBER	FSCM	PART NUMBER
C-10	13	5935-01-169-4144	96906	MS3472W14-19P
C-10	14	5310-00-934-9739	96906	MS35649-242
C-10	15	5940-00-682-2477	96906	MS77068-1
C-10	16		19200	9310969
C-10	17	5930-00-914-6458	96906	MS90310-231
C-10	18	6680-01-065-6969	19203	9310953
C-10	19	5940-00-827-2653	96906	MS77068-2
C-10	20	5310-00-081-8087	96906	MS21044-N06
C-10	21	5940-01-074-4475	96906	MS0035431-10
C-10	22	5930-00-843-8990	96906	MS24658-22D
C-10	23	5930-01-062-9808	19203	9321211-1
C-10	24	5935-01-061-1483	96906	MS90335-1
C-10	25	6240-00-155-7836	96906	MS25237-327AS15
C-10	26	6210-00-302-6002	19200	1256373
C-10	27	5305-00-115-3031	96906	MS21093-0409
C-11	1	4940-01-049-0828	19200	9325900
C-11	2	4940-01-048-9677	19200	9325901

APPENDIX D

EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST

Section I. INTRODUCTION

D-1. SCOPE

This appendix lists expendable/durable supplies and materials you will need to operate and maintain the M130 general purpose dispenser. This listing is for informational purposes only and is not authority to requisition the listed items. These items are authorized to you by CTA 50-970, Expendable/Durable Items (Except Medical, Class V, Repair Parts, and Heraldic Items), or CTA 8-100, Army Medical Department Expendable/Durable Items.

D-2. EXPLANATION OF COLUMNS

An explanation of columns is provided below.

- a. Column 1-Item Number. This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the material (e.g., "Use cleaning compound, item 5, Appx D.")
- b. Column 2-Level. This column identifies the lowest level of maintenance that requires the listed item.
 - O Aviation Unit Maintenance
 - F Aviation Intermediate Maintenance
- c. Column 3-National Stock Number. This is the National stock number assigned to the item; use it to request or requisition the item.
- d. Column 4-Description. Indicates the Federal item name and, if required, a description to identify the item. Th last line for each item indicates the Federal Supply Code for Manufacturer (FSCM) in parentheses followed by the part number.
- e. Column 5-Unit of Measure (U/M). Indicates the measure used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea, in., pr). If the unit of measure differs from the unit of issue, requisition the lowest unit of issue that will satisfy your requirements.

(1)	(2)	(3) NATIONAL	(4)	(5)
ITEM NUMBER	LEVEL	STOCK NUMBER	DESCRIPTION	U/M
1	F	8040-00-262-9011	ADHESIVE SYNTHETIC RUBBER, LIQUID, TYPE III, 1-PT(0.47-I) CAN (81348)MMM-A-1617	CN
2	0	8020-00-224-8010	BRUSH, ARTIST'S FLAT, CHISEL EDGE, OX-EAR HAIR(81348) H-B-118	EA
3	0	8305-01-152-3587	CLOTH, BATISTE WHITE(LINT-FREE), 45-IN.(114.30-CM)WIDE (81349)MIL-C-40129	YD
4	0	7510-00-161-0811	INK, MARKING STENCIL BLACK, TYPE II, 1-GAL.(3.79-I)CAN (81349) TT-I-1795	GL
5	F	5970-00-285-0271	INSULATING VARNISH (81349) MILV173	GL
6	F	5970-00-812-2969	INSULATION SLEEVING HEAT SHRINKABLE, CLASS 1 (81349) MIL-123053/5	FT
7	0	8010-00-527-2884	LACQUER BLACK NO. 37038 1- GAL.(3.79-I)CAN(81349)MIL- L-19538	GL
8	F	8030-00-081-2326	SEALING COMPOUND GRADE H (81349) MILS22473GRADEH	CC
9	F	3439-00-006-7764	SOLDER, TIN ALLOY 1-LB (0.45-KG) SPOOL, FORM W, SN 63 COMPOSITION (81349) QQS571	EA
10	0	8135-00-272-9346	TAPE,GUMMED BROWN, OPAQUE, 2-IN. (5-08-CM) WIDE (558536) A-A-1492	RO
11	F	6145-00-107-7913	WIRE, ELECTRICAL SINGLE CON- DUCTOR, AWG 20 (81349) M81044/12-20-9	FT

TM9-1095	-206-128	žΡ		
(1)	(2)	(3)	(4)	(5)
ITEM		NATIONAL STOCK NUMBER		
NUMBER	LEVEL		DESCRIPTION	U/M
12	F	6145-00-422-2644	WIRE, ELECTRICAL SINGLE CON- DUCTOR, AWG 24 (81349) M81044/12-24-9	FT

APPENDIX E

ELECTRICAL WIRING/LOGICAL DIAGRAMS

E-1. PURPOSE

This appendix lists diagrams which could aid an experienced individual in troubleshooting methods to isolating uncommon electrical functional faults not covered by the test procedures of this manual for maintaining the Dispenser, General Purpose, Aircraft: M130. These diagrams address the electrical circuits only.

NOTE

These diagrams are provided as reference information and are under restrictive use by personnel, with authorization from their test/repair facility supervisor.

E-2. DIAGRAMS LISTING

The following diagrams are provided to aid the test/repair individual when using the Operator's and Aviation Unit Maintenance Manual (AVUM).

 a. M130 Chaff/Flare Dispenser System Dual Configuration 	see fig. E-1
b. M130 Wiring Interface	see fig. E-2
c. Dispenser Control Box	see fig. E-3

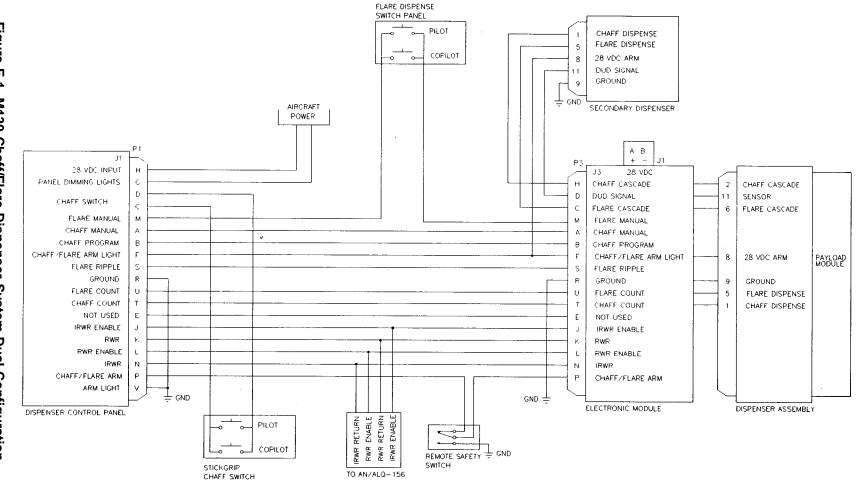
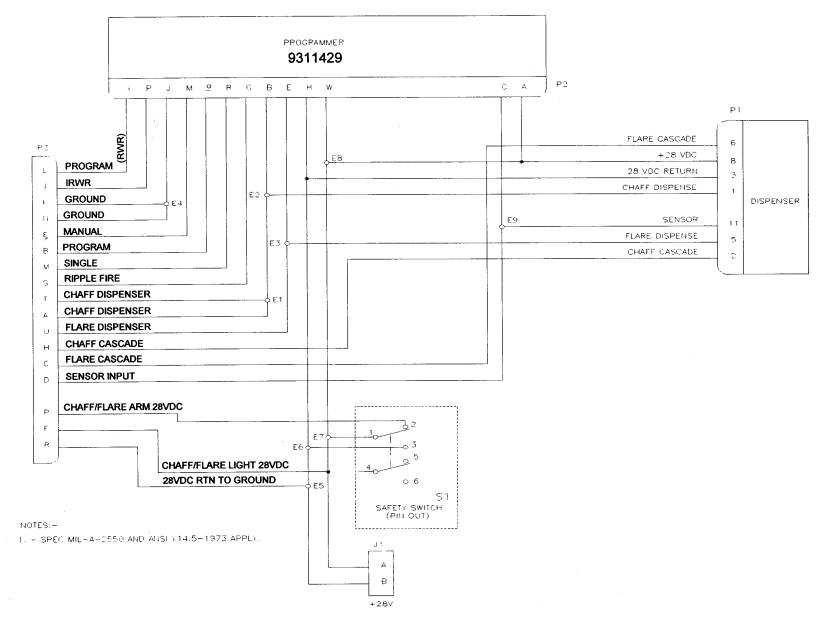


Figure E-1. M130 Chaff/Flare Dispenser System Dual Configuration



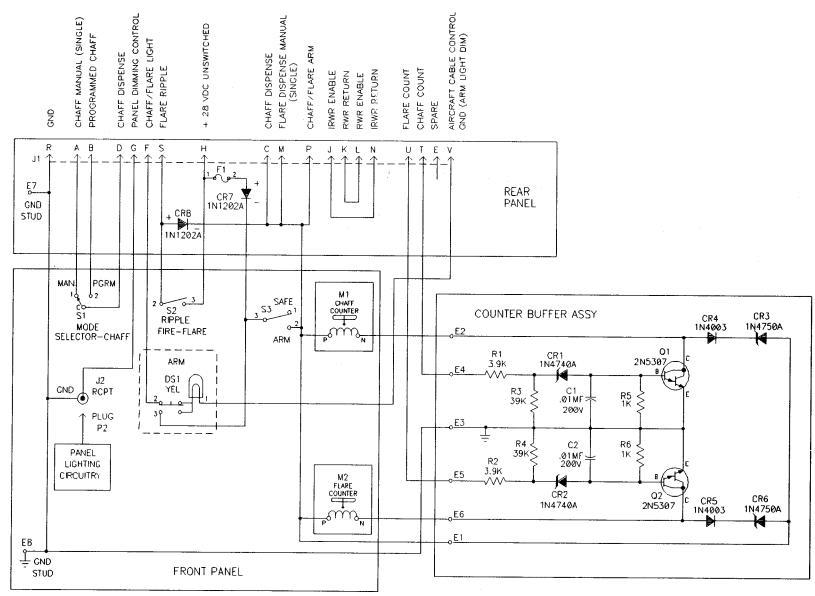


Figure E-3. Dispenser Control Box (P/N 9272533)

NOTES: -

1 - RESISTORS ARE 1/4W, ± 5% TOL UNLESS OTHERWISE SPECIFIED

GLOSSARY

ACFT PWR Aircraft Power APPX Appendix

AR Army Regulation

AVIM Aviation Intermediate Maintenance

AVUM Aviation Unit Maintenance
BITE Built-In Test Equipment

BOI Basis of Issue

C Chaff Confidential

CCA Circuit Card Assemblies

CM Centimeter
CN Can
CONT Continued

CPC Corrosion Prevention and Control CTA Common Tables of Allowances

DA Department of the Army

DA PAM Department of the Army Pamphlet

DCP Dispenser Control Panel

DISP Dispenser

DISP COMPL Dispense Complete

DMWR Depot Maintenance Work Requirement

DX Direct Exchange

EA Each

EIR Equipment Improvement Recommendations

EM Electronics Module

EOD Explosive Ordnance Disposal

EQPT Equipment
ETC Et cetera
F Flare
FIG. Figure

FM Field Manual FOI Firing Order Indicator

FSCM Federal Supply Code for Manufacturer

FT Foot
GAL Gallon
GL Gallon

GSE Ground Support Equipment

IN. Inch
IN.-LB Inch-Pound
INTVL Interval
KG Kilogram
KPA Kilopascal
LB Pound

MAC Maintenance Allocation Chart

MAN-PGRM Manual-Program MIL-STD Military Standard

MTOE Modified Table of Organization
NATO North Atlantic Treaty Organization
NIIN National Item Identification Number

N-M Newton Meter NO. Number

GLOSSARY (cont)

NSN National Stock Number

OHM Ohmmeter PARA Paragraph

PHY SEC CL Physical Security Classification

PMCS Preventive Maintenance Checks and Services

P/N Part Number

PR Pair

PSI Pound-Force Per Square Inch

PT Pint

QA Quality Assurance QC Quality Control

RO Roll

ROD Report of Discrepancy

RPSTL Repair Parts and Special Tools List

(S) Secret SEQ Sequencer SF Standard Form

SMR Source, Maintenance, and Recoverability

SRA Specialized Repair Act

SV Stray Voltage SYS System (T) Top Secret

TBO Time Between Overhaul
TM Technical Manual

TMDE Test, Measurement, and Diagnostic Equipment

TS Test Sequence
U/M Unit of Measure
UOC Usable On Code
VDC Volt Direct Current

WRMUP Warmup YD Yard

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THE METRIC SYSTEM AND EQUIVALENTS

LINEAR MEASURE

- 1 Centimeter = 10 Millimeters = 0.01 Meters = 0.3937 Inches
- 1 Meter = 100 Centimeters = 1000 Millimeters = 39.37 Inches
- 1 Kilometer = 1000 Meters = 0.621 Miles

WEIGHTS

- 1 Gram = 0.001 Kilograms = 1000 Milligrams = 0.035 Ounces
- 1 Kilogram = 1000 Grams = 2.2 Lb.

TO CHANGE

Feet

1 Metric Ton = 1000 Kilograms = 1 Megagram = 1.1 Short Tons

TO

Centimeters

Meters

Meters

Square Centimeters

Square Meters

Square Meters

LIQUID MEASURE

- 1 Milliliter = 0.001 liters = 0.0338 Fluid Ounces
- 1 liter = 1000 Milliliters = 33.82 Fluid Ounces

Inches

Feet

Yards

Miles

Square

Square Feet Square Yards

SQUARE MEASURE

- 1 Sq Centimeter = 100 Sq Millimeters = 0.155 Sq Inches 1 Sq Meter = 10,000 Sq Centimeters = 10.76 Sq feet 1 Sq Kilometer = 1,000,000 Sq Meters = 0.386 Sq Miles

CUBIC MEASURE

- 1 Cu Centimeter = 1000 Cu Millimeters = 0.06 Cu
- 1 Cu Meter = 1,000,000 Cu Centimeters = 35.31 Cu

TEMPERATURE

MULTIPLY BY

0.305

0.914

1.609

6.451

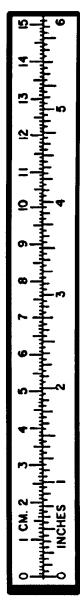
0.093

0.836

5/9 (°F- 32) = °C 212° Fahrenheit is equivalent to 100° Celsius 90° Fahrenheit is equivalent to 32.2° Celsius 32° Fahrenheit is equivalent to 0° Celsius 9/5 C° +32 = F°

APPROXIMATE CONVERSION FACTORS

oquaio iuico	Oqualo Motoro	0.000
Square Miles	Square Kilometers	2.590
Acres	Square Hectometers	0.405
Cubic Feet	Cubic Meters	0.028
Cubic Yards	Cubic Meters	0.765
Fluid Ounces	Milliliters	29.573
Pints	Liters	0.473
Quarts	Liters	0.946
Gallons	Liters	3.785
Ounces	Grams	28.349
Pounds	Kilograms	0.473
Short Tons	Metric Tons	0.907
Pound-feet	Newton-Meters	1.356
		6.895
Pounds per Square Inch	Kilopascals	
Miles per Gallon	Kilometers per Liter	0.425
Wiles per Hour	Kilometers per Hour	1.609
TO CHANGE	TO MULT	IPLY BY
Centimeters	Inches	0.394
Meters	Feet	3.280
Meters	Yards	1.094
		0.621
Kilometers	Miles	
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Kilometers Square Square Meters	MilesSquare InchesSquare Feet	0.621
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Kilometers	Miles Square Inches Square Feet Square Yards Square Miles Acres Cubic Feet	0.621 0.155 10.764 1.196 0.386 2.471 35.315
Kilometers	Miles Square Inches Square Feet Square Yards Square Miles Acres Cubic Feet Cubic Yards	0.621 0.155 10.764 1.196 0.386 2.471 35.315 1.308
Kilometers	Miles Square Inches Square Feet Square Yards Square Miles Acres Cubic Feet Cubic Yards Fluid Ounces	0.621 0.155 10.764 1.196 0.386 2.471 35.315 1.308 0.034
Kilometers	Miles Square Inches Square Feet Square Yards Square Miles Acres Cubic Feet Cubic Yards Fluid Ounces Pints	0.621 0.155 10.764 1.196 0.386 2.471 35.315 1.308 0.034 2.113
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Kilometers Square Square Meters Square Meters Square Kilometers Square Hectometers Cubic Cubic Meters Milliliters Liters Liters Grams Kilograms Metric Tons	Miles Square Inches Square Feet Square Yards Square Miles Acres Cubic Feet Cubic Yards Fluid Ounces Pints Quarts Gallons Ounces Pounds Short	0.621 0.155 10.764 1.196 0.386 2.471 35.315 1.308 0.034 2.113 1.057 0.264 0.035 2.205 1.102
Kilometers Square Square Meters Square Meters Square Kilometers Square Hectometers Cubic Cubic Meters Milliliters Liters Liters Grams Kilograms Metric Tons Newton-Meters	Miles Square Inches Square Feet Square Yards Square Miles Acres Cubic Feet Cubic Yards Fluid Ounces Pints Quarts Gallons Ounces Pounds Short Pound-Feet	0.621 0.155 10.764 1.196 0.386 2.471 35.315 1.308 0.034 2.113 1.057 0.264 0.035 2.205 1.102 0.738
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