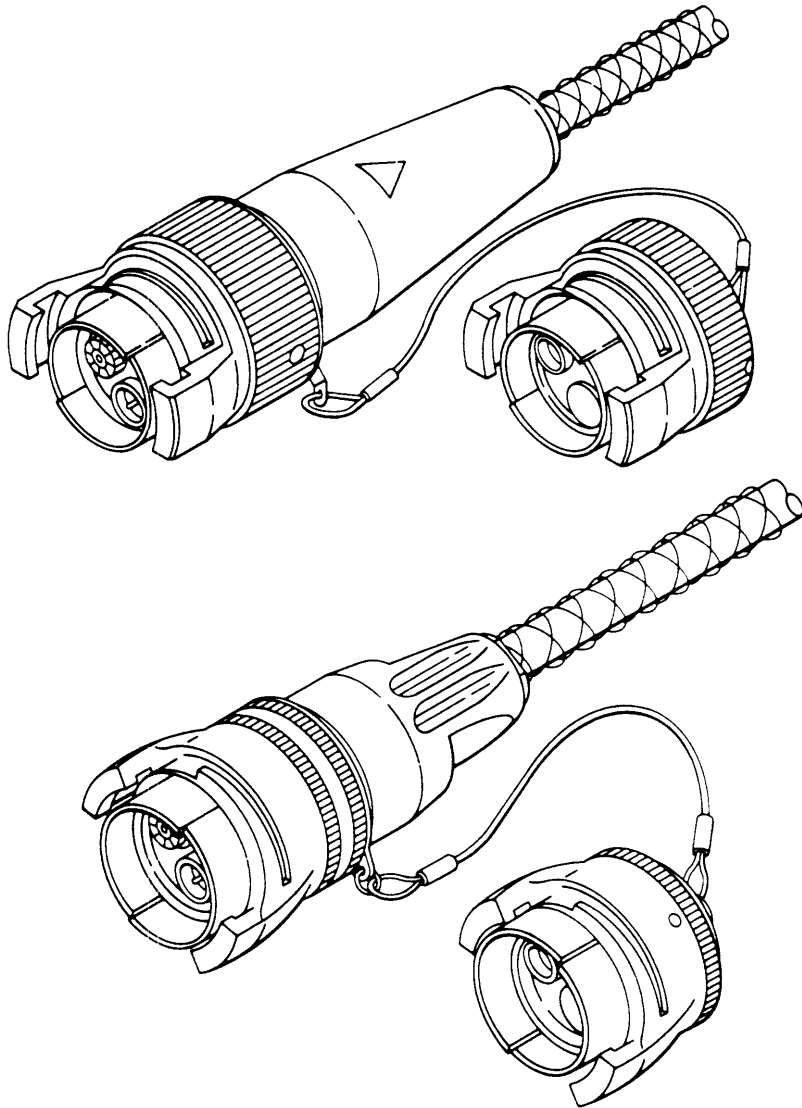


**ORGANIZATIONAL, DIRECT SUPPORT,
AND GENERAL SUPPORT
MAINTENANCE MANUAL
INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST**



EQUIPMENT
DESCRIPTION

PAGE 1-3

ORGANIZATIONAL
PMCS

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ORGANIZATIONAL
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PAGE 2-8

GENERAL SUPPORT
TROUBLESHOOTING

PAGE 3-1

GENERAL SUPPORT
MAINTENANCE

PAGE 3-2

**CABLE ASSEMBLY, SPECIAL PURPOSE,
ELECTRICAL CX-11230AIG (1320 FOOT)
(NSN 5995-01-121-6623) AND
CX-11230A/G (100 FOOT) (NSN 5995-01-125-6781)**

HEADQUARTERS, DEPARTMENT OF THE ARMY

12 MARCH 1984



5

SAFETY STEPS TO FOLLOW IF SOMEONE IS THE VICTIM OF ELECTRICAL SHOCK

1

DO NOT TRY TO PULL OR GRAB THE INDIVIDUAL

2

IF POSSIBLE, TURN OFF THE ELECTRICAL POWER

3

IF YOU CANNOT TURN OFF THE ELECTRICAL POWER, PULL, PUSH, OR LIFT THE PERSON TO SAFETY USING A WOODEN POLE OR A ROPE OR SOME OTHER INSULATING MATERIAL

4

SEND FOR HELP AS SOON AS POSSIBLE

5

AFTER THE INJURED PERSON IS FREE OF CONTACT WITH THE SOURCE OF ELECTRICAL SHOCK, MOVE THE PERSON A SHORT DISTANCE AWAY AND IMMEDIATELY START ARTIFICIAL RESUSCITATION

WARNING

When you are troubleshooting, do not open any cable connections. Opening a connection can expose you to a fatal shock by high voltage. If you find it necessary to remove or replace a component or a cable section in the system, use your order wire hookup and call the MUX equipment operators. Tell them to remove the power from the cable hookup.

WARNING

Extremely high voltages exist when you are using the Insulation Breakdown Test Set AN/GSM-6. Voltages as high as 40,000 volts may exist at the output terminals, output cable, and cable under test.

Don't take chances. Be extremely careful. Serious injury or death may result from carelessness.

WARNING

Make sure the AN/GSM-6 and the cable test stub are properly grounded during the insulation breakdown test. Death or serious injury could result from electrical shock when the equipment is in operation.

WARNING

Twin coax cable assembly being tested for insulation breakdown must be capped at the other end. Death or serious injury to personnel could result from electrical shock.

TECHNICAL MANUAL

NO. 11-5995-208-24& P-1

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC, 12 March 1984

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

**CABLE ASSEMBLY, SPECIAL PURPOSE, ELECTRICAL
CX-11230A/G (1320 FOOT) (NSN 5995-01-121-6623)
AND CX-11230A/G (100 FOOT) (NSN 5995-01-125-6781)**

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: Commander, U.S. Army Communications-Electronics Command and Fort Monmouth, ATTN: DRSEL-ME-MP, Fort Monmouth, New Jersey 07703. A reply will be furnished to you.

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III	Technical Principles of Operation	1-5
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CHAPTER 3	GENERAL SUPPORT MAINTENANCE	3-1
Section I	Repair Parts; Special Tools; Test, Measurement, and Diagnostic Equipment (TMDE); and Support Equipment	3-1
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HOW TO USE THIS MANUAL

This manual tells you how to maintain, repair, and test Cable Assembly, Special Purpose, Electrical CX-11230A/G.

The front cover index will assist you in quickly locating information. Each item appearing on the front cover is boxed and identified by topic, with the page number in the manual where the information is located. The page in the manual used in conjunction with the front cover has a black box in the edge of the page. Bend the manual in half, and follow the margin index to the page with the black edge marker.

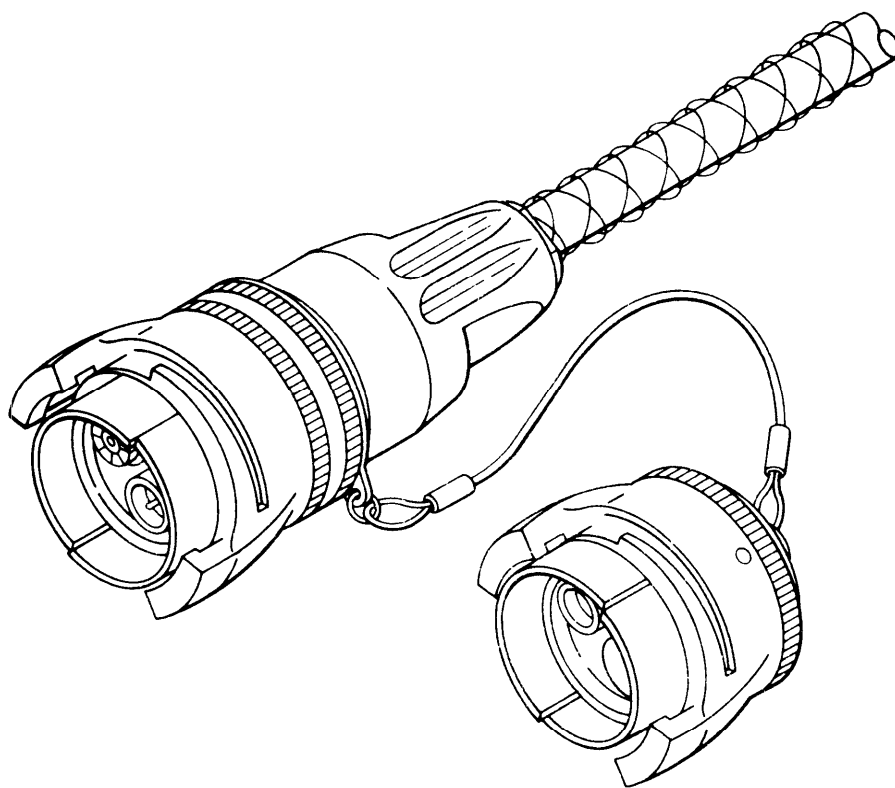
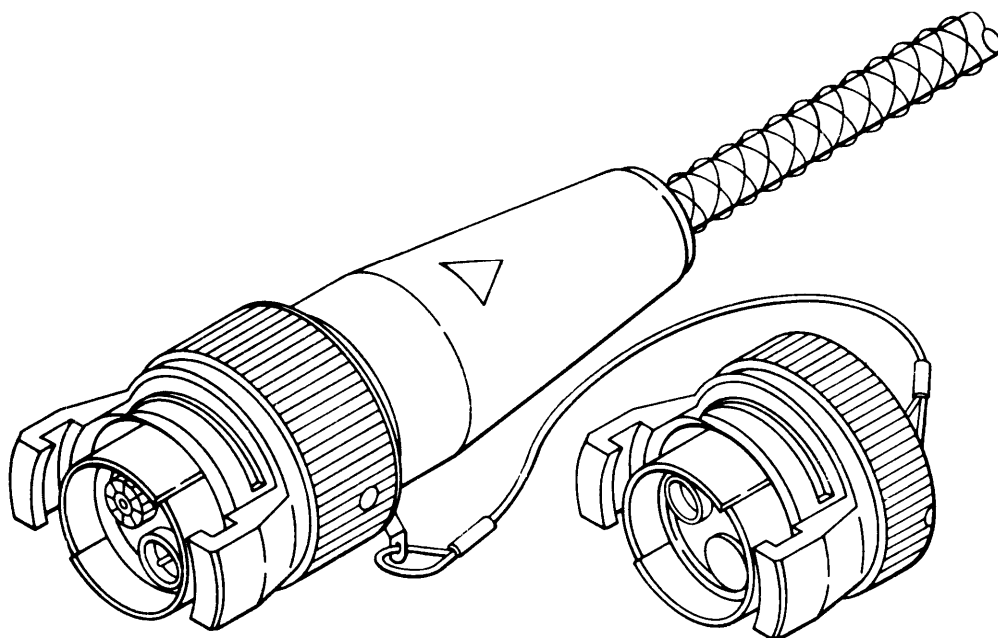
Entries within the table of contents that duplicate the entries on the front cover index are highlighted in boldface.

A subject index appears at the beginning of each chapter and lists, in alphabetical order, paragraphs that are included in each chapter.

Within this manual you will find illustrations of repair parts. Alongside each part is a number. This number is used for identification between illustration and procedure.

Step by step procedures with illustrations will give you all the necessary information needed **to** repair the cable assembly. The steps must be followed in exact sequence. Do not attempt **any** shortcuts.

Before attempting any procedure described in this manual, you should familiarize yourself with the entire procedure before beginning the task.



CABLE ASSEMBLY, SPECIAL PURPOSE, ELECTRICAL CX-11230A/G

CHAPTER 1

INTRODUCTION

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Administrative Storage.....	1-2
Consolidated Index of Army Publications and Blank Forms.....	1-1
Destruction of Army Electronics Materiel.....	1-2
Differences Between Connectors.....	1-3
Equipment Characteristics, Capabilities, and Features.....	1-3
Equipment Performance Data.....	1-3
Maintenance Forms, Records, and Reports.....	1-1
Nomenclature Cross-Reference List.....	1-2
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Section I GENERAL INFORMATION

SCOPE

Type of Manual: Organizational, Direct Support, and General Support Maintenance including Repair Parts and Special Tools.

Type Number and Equipment Name: CX-11230A/G, Cable Assembly, Special Purpose, Electrical.

Purpose of Equipment: Provides transmission paths for signals in pulse code modulation (PCM) communications systems.

NOTE

The present maintenance program does not include any direct support tasks.

CONSOLIDATED INDEX OF ARMY PUBLICATIONS AND BLANK FORMS

Refer to the latest issue of DA Pam 310-1 to determine whether there are new editions, changes or additional publications pertaining to the equipment.

MAINTENANCE FORMS, RECORDS, AND REPORTS

REPORT OF MAINTENANCE AND UNSATISFACTORY EQUIPMENT

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by TM 38-750, The Army Maintenance Management System (TAMMS).

REPORT OF PACKAGING AND HANDLING DEFICIENCIES

Fill out and forward SF 364 (Report of Discrepancy (ROD)) as prescribed in AR 735-11-2/DLAR 4140.55/NAVMATINST 4355.73A/AFR 400-54/MCO 4430.3F.

MAINTENANCE FORMS, RECORDS, AND REPORTS (CONT)

DISCREPANCY IN SHIPMENT REPORT (DISREP) (SF 361)

Fill out and forward Discrepancy in Shipment Report (DISREP) (SF 361) as prescribed in AR 55-38/NAVSUPINST 4610.33C/AFR 75-18/MCO P4610.19D/DLAR 4500.15.

DESTRUCTION OF ARMY ELECTRONICS MATERIAL

Destruction of Army electronics material to prevent enemy use shall be in accordance with TM 750-244-2.

ADMINISTRATIVE STORAGE

Administrative storage of equipment issued to and used by Army activities will have preventive maintenance performed in accordance with the PMCS charts before storing. When removing the equipment from administrative storage, the PMCS should be performed to ensure operational readiness. See chapter 2, section II for PMCS.

REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)

If your cable equipment 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 to: Commander, US Army Communications-Electronics Command and Ft. Monmouth, ATTN: DRSEL-ME-MP, Fort Monmouth, New Jersey 07703. A reply will be sent to you.

NOMENCLATURE CROSS-REFERENCE LIST

This list contains names used throughout this manual in place of official nomenclature.

COMMON NAME	OFFICIAL NOMENCLATURE
twin coaxial cable assembly	Cable Assembly, Special Purpose, Electrical CX-11230A/G
twin coaxial adapter cable	Cable Assembly, Special Purpose, Electrical CX-10734/G
unattended repeater	Restorer, Pulse Forms TD-206(*)/G
attended repeater	Multiplexer TD-754/G
MUX equipment	Multiplexer TD-202/U, TD-203/U, TD-204/U
connector	Connector, Plug, Electrical UG-1870A/U
cap	Cap Assembly, Electrical
multimeter	Multimeter AN/USM-223

NOMENCLATURE CROSS-REFERENCE LIST (CONT)

COMMON NAME	OFFICIAL NOMENCLATURE
telephone test set	Test Set, Telephone AN/PTM-7
insulation breakdown test set	Test Set, Insulation Breakdown AN/GSM-6
resistance bridge	Resistance Bridge ZM-4B/U
Tool Kit TK-100/G	Tool Kit, Electronic Equipment TK-100/G
Tool Kit TK-101/G	Tool Kit, Electronic Equipment TK-101/G
Tool Kit TK-105/G	Tool Kit, Electronic Equipment TK-105/G

Section II EQUIPMENT DESCRIPTION AND DATA**EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES****TWIN COAXIAL CABLE CX-11230A/G**

Contains two small coaxial cables.
 Carries up to 48 channels of PCM signals.
 Can be laid on the ground, suspended from poles or trees, or buried.
 Requires an unattended repeater at the end of each mile of cable.
 Carries dc power for the unattended repeater. (This dc power is supplied by the MUX equipment connected to the cable.)
 Requires an attended repeater every 40 miles.
 Available in 100-foot or 1/4-mile lengths.

DIFFERENCES BETWEEN CONNECTORS

Connectors are being supplied by two different manufacturers. Although electrically identical, they are configured differently. One connector, which you will see most often, is marked with two small dots on the face seal of the connector shell. The other connector you will see has letter and word markings.

The connector with the letter and word markings on the face seal has a body made of high-impact plastic instead of metal.

EQUIPMENT PERFORMANCE DATA

Channel Capacity: 6, 12, 24, or 48 channels.

Insulation Quality: Can withstand up to 2500 vdc between center conductor and shield.

Insulation Resistance: 50,000 megohms between center conductor and shield.

EQUIPMENT PERFORMANCE DATA (CONT)

Characteristic Impedance: 55 to 62 ohms in the frequency range of 500 kHz to 20 MHz.

Dc Resistance of Center Conductor: 22 ohms for each 1320 feet (1/4 mile) of cable when temperature is 66°F; 2 ohms for 100 feet of cable when temperature is 68°F.

Dc Resistance of the Shield: 7.5 ohms for each 1320 feet (1/4 mile) of cable when temperature is 68°F; 0.9 ohms for 100 feet of cable when temperature is 68°F.

Signal Attenuation: 2 db for each 1320 feet (1/4 mile) of cable at 20 kHz; 9.5 db at 2300 kHz; 32.0 db at 20.0 MHz.

Tensile Strength of Cable: 1200 pounds.

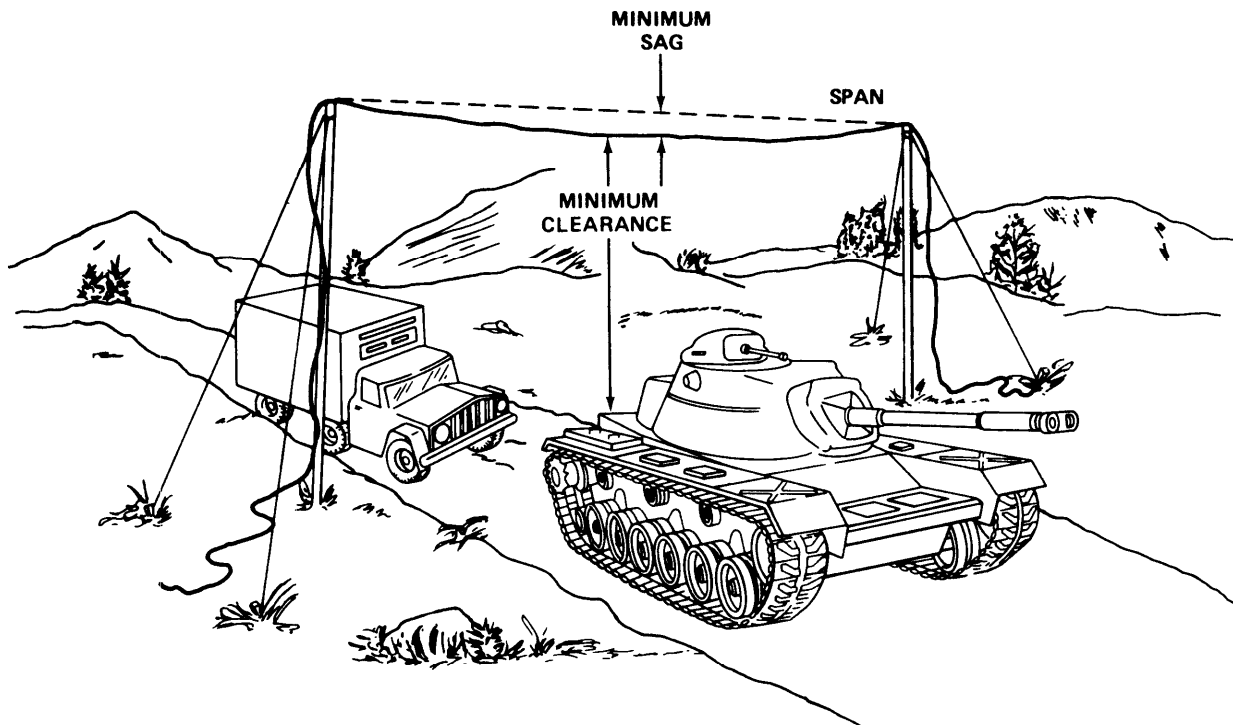
Tensile Strength of Junction between Cable and Connector: 350 pounds.

Span and Minimum Sag Specifications:

WARNING

Be sure you know what the minimum clearance is before you hang your cable. Your supervisor or team chief should give you specific clearance heights before you start out on your cable laying mission.

Do not put cable connectors in the span.



EQUIPMENT PERFORMANCE DATA (CONT)

NOTE

If the span distance falls between two of the below span figures, use the higher minimum sag. (For example: a span of 162 feet should have a minimum sag of 48 inches.)

If the span is greater than 200 feet, use a messenger cable following the techniques described in FM 24-20.

<u>Length of Span</u>	<u>Minimum Sag</u>
100 feet	16 inches
125 feet	24 inches
150 feet	36 inches
175 feet	48 inches
200 feet	72 inches

Section III TECHNICAL PRINCIPLES OF OPERATION

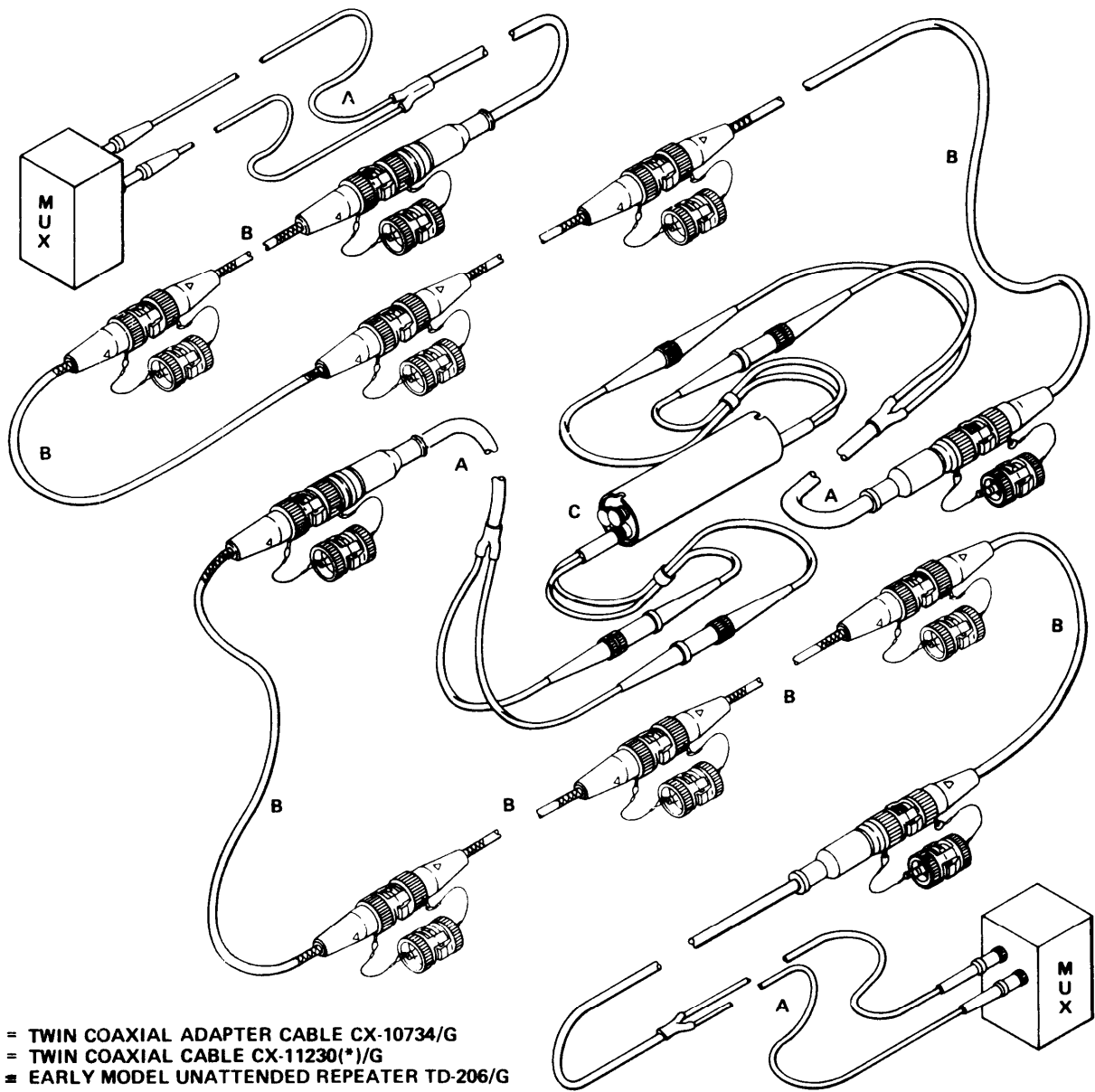
PRINCIPLES OF OPERATION

Typical applications of the twin coaxial cable assembly are shown in the following cabling diagrams. The applications shown are not the only operating options available. Other applications are available depending on your unit mission. Follow the requirements for the individual equipments you are operating with.

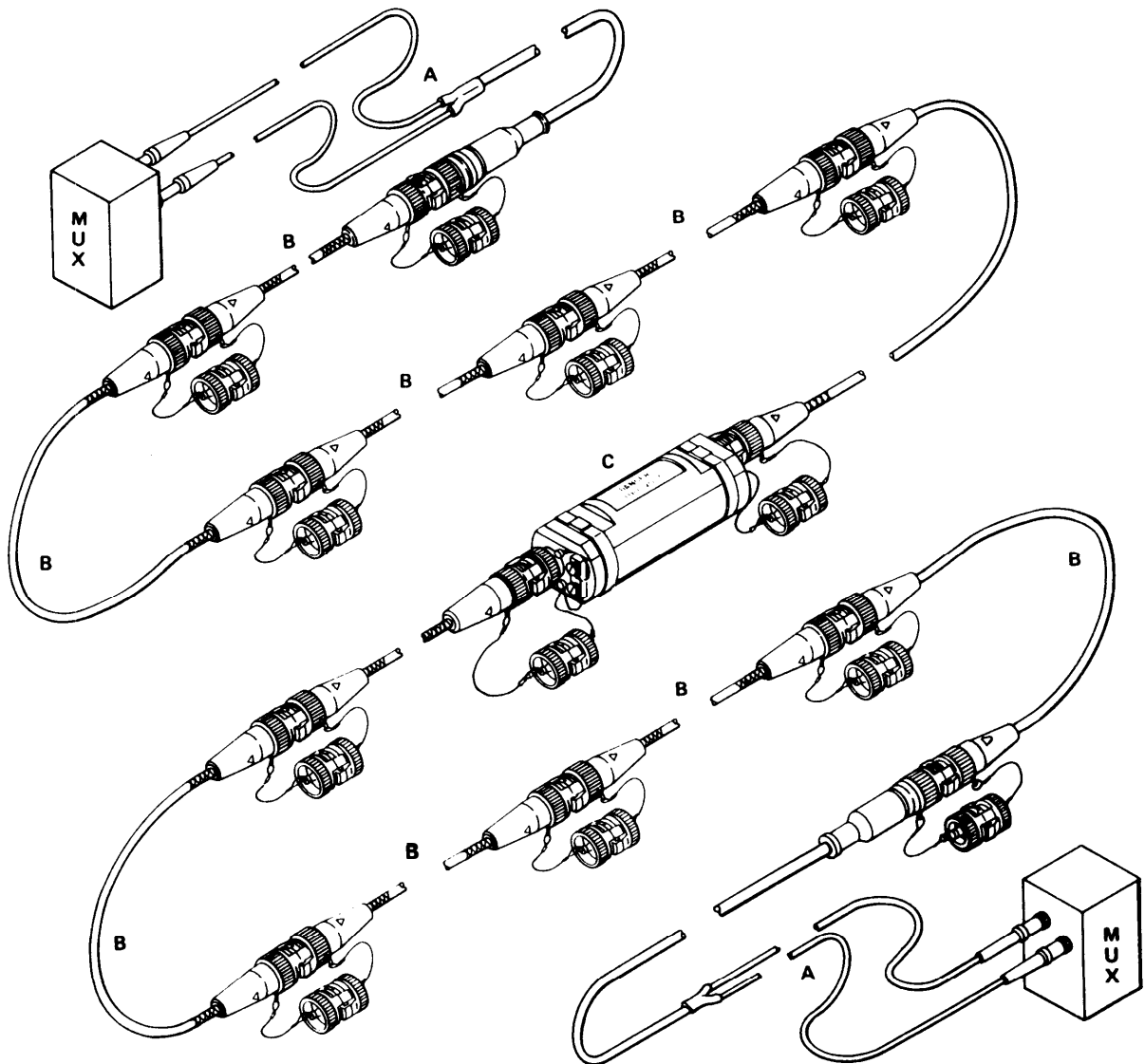
NOTE

The first cabling diagram depicts the application of an early model unattended repeater. The second diagram depicts the application of a late model unattended repeater.

PRINCIPLES OF OPERATION (CONT)



PRINCIPLES OF OPERATION (CONT)



- A = TWIN COAXIAL ADAPTER CABLE CX-10734/G
- B = TWIN COAXIAL CABLE CX-11230(*)/G
- C = EARLY MODEL UNATTENDED REPEATER TD-206/G

CHAPTER 2

ORGANIZATIONAL MAINTENANCE

Subject	Page
Cap Replacement and Repair.....	2-8
Common Tools and Equipment.....	2-1
General (Organizational Maintenance Procedures).....	2-8
General (Organizational Preventive Maintenance Checks and Services).....	2-2
General (organizational Troubleshooting).....	2-7
General (Preparation for Storage or Shipment).....	2-12
Initial Inspection.....	2-2
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Outer Plastic Jacket Repair.....	2-9
Quality Checks.....	2-2
Repair Parts.....	2-1
Routine Checks and Services.....	2-4
Special Tools, TMDE, and Support Equipment.....	2-1

Section I REPAIR PARTS; SPECIAL TOOLS; TEST, MEASUREMENT, AND DIAGNOSTIC EQUIPMENT (TMDE); AND SUPPORT EQUIPMENT

COMMON TOOLS AND EQUIPMENT

For authorized common tools and equipment, see appendix B, section III, Maintenance Allocation Chart (MAC).

SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

No special tools are authorized for use by organizational maintenance . For aauthorized TMDE and Support Equipment, see appendix B (MAC), section III.

REPAIR PARTS

Repair parts required for organizational maintenance are listed and illustrated in appendix D.

Section II SERVICE UPON RECEIPT

INITIAL INSPECTION

Never assume that newly received twin coaxial cable assemblies are all perfectly serviceable. Upon receipt, carefully perform a visual inspection to make sure that all connectors are properly capped, and an ID tag is attached with the following information:

1. Nomenclature
2. Length

Make sure also that all reels are sound and can be used on the proper reel machine.

QUALITY CHECKS

Do all the PMCS items on pages 2-5 and 2-6.

Perform a dynamic test.

NOTE

Your organization should have a standard procedure for checking the quality of newly received cables. This procedure should include a dynamic test with the cables connected in a working PCM circuit with the MUX equipment.

Section III ORGANIZATIONAL PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

GENERAL

To be sure that your cables will be able to support your mission, you must do scheduled preventive maintenance checks and services.

Before cables are placed in storage, do all the PMCS items. This will help you keep your cables in top shape.

After cables are removed from storage, and before releasing to a cable laying crew, do all the PMCS items to make sure your cables are ready to go.

Monthly PMCS are important steps you should do on cables belonging to your unit and which are not hooked up to an operating system. These steps should keep serious problems from suddenly happening. If you waited to do PMCS on these cables just before your mission, you may find that you do not have enough cables.

GENERAL (CONT)

NOTE

All faults and corrective actions will be noted on DA Form 2404, Equipment Inspection and Maintenance Worksheet (see below). The item number recorded in column "a" of this form must correspond to the item number in the PMCS chart on page 2-5. Refer to TM 38-750 for instructions on use of this form for preventive maintenance services.

EQUIPMENT INSPECTION AND MAINTENANCE WORKSHEET									
For use of this form, see TM 38 750. The proponent agency is the Office of the Deputy Chief of Staff for Logistics									
1 ORGANIZATION					2 NOMENCLATURE AND MODEL				
3 REGISTRATION SERIAL NSN			4a MILES	5 HOURS	6 ROUNDS FIRED	7 HOT STARTS	8 DATE		9 TYPE INSPECTION
7 APPLICABLE REFERENCE									
TM NUMBER			TM DATE		TM NUMBER			TM DATE	
COLUMN a - Enter TM item number.					COLUMN d - Show corrective action for deficiency or shortcoming listed in Column c.				
COLUMN b - Enter the applicable condition status symbol.					COLUMN e - Individual ascertaining completed corrective action initial in this column				
COLUMN c - Enter deficiencies and shortcomings.									
STATUS SYMBOLS									
"X"-Indicates a deficiency in the equipment that places it in an inoperable status.					DIAGONAL "()"-Indicates a materiel defect other than a deficiency which must be corrected to increase deficiency or to make the item completely serviceable.				
CIRCLED "X"-Indicates a deficiency, however, the equipment may be operated under specific limitations as directed by higher authority or as prescribed locally, until corrective action can be accomplished.					LAST NAME INITIAL IN BLACK, BLUE-BLACK INK, OR PENCIL-Indicates that a completely satisfactory condition exists.				
HORIZONTAL DASH "-"-Indicates that a required inspection, component replacement, maintenance operation check, or test flight is due but has not been accomplished, or an overdue MWO has not been accomplished.					FOR AIRCRAFT-Status symbols will be recorded in red.				
ALL INSPECTIONS AND EQUIPMENT CONDITIONS RECORDED ON THIS FORM HAVE BEEN DETERMINED IN ACCORDANCE WITH DIAGNOSTIC PROCEDURES AND STANDARDS IN THE TM CITED HEREON									
8a SIGNATURE (Inspector performing inspection) BY TIME					9a SIGNATURE (Maintenance Supervisor) BY TIME			10 MANHOURS REQUIRED	
TM ITEM NO	STATUS	DEFICIENCIES AND SHORTCOMINGS			CORRECTIVE ACTION			INITIAL WHEN CORRECTED	
c	b				d				
1.		outer jacket is cut.							

USE PMCS ITEM NO.

DA FORM 2404 1 APR 79

ROUTINE CHECKS AND SERVICES

The following are routine checks and services and are not listed in your PMCS table. These checks and services should be done anytime you see that they are necessary.

If you find what you consider a routine check or service in the PMCS table, it was listed because other organizations reported it as a critical procedure.

CLEANING THE OUTER BLACK PLASTIC JACKET ON ALL CABLES

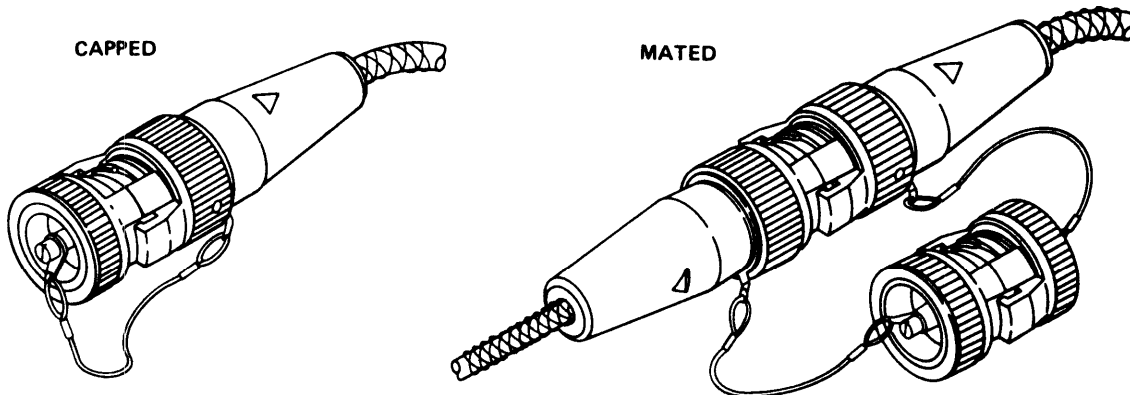
CAUTION

Do not use solvents while cleaning outer black plastic jacket.

Use a clean rag with clear water to remove mud and dirt.

Use soapy water, and then rinse with clear water to remove oil or grease.

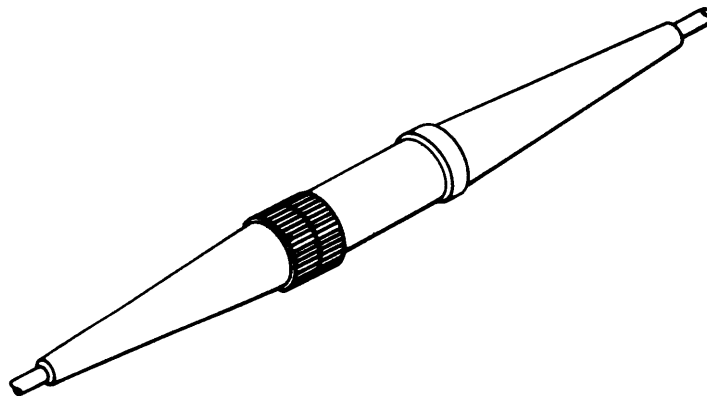
CAPPING CONNECTOR UG-1870A/U



Always cap the connector when it is not in use (including storage).

Always mate the caps when in use,

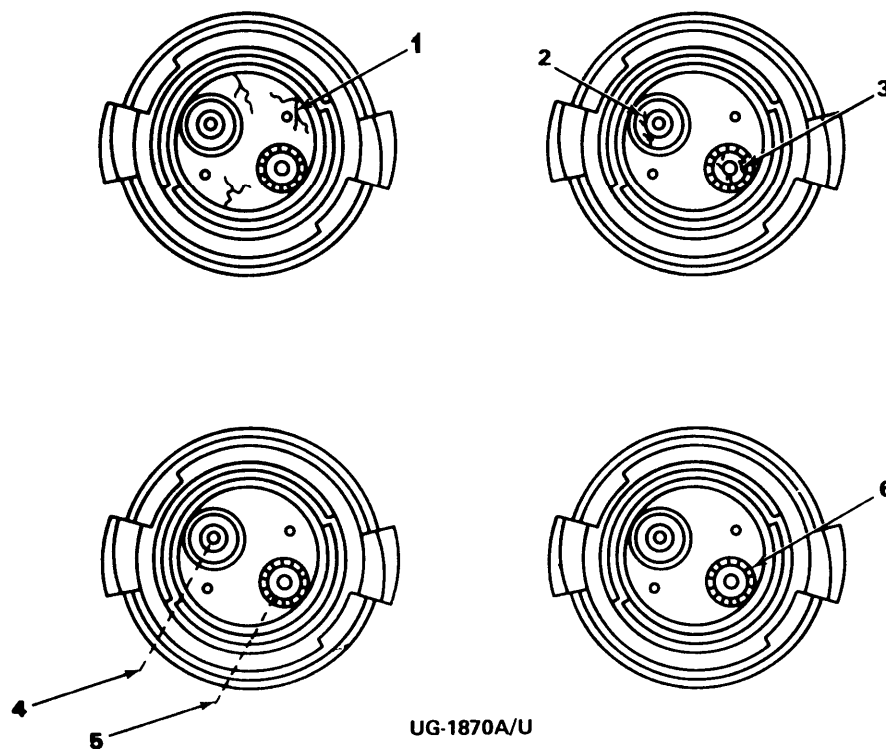
CONNECTORS UG-1871/U AND UG-1872/U



Always mate the connectors to each other when not in use (including storage).

**ORGANIZATIONAL PREVENTIVE MAINTENANCE CHECKS AND SERVICES
M-MONTHLY**

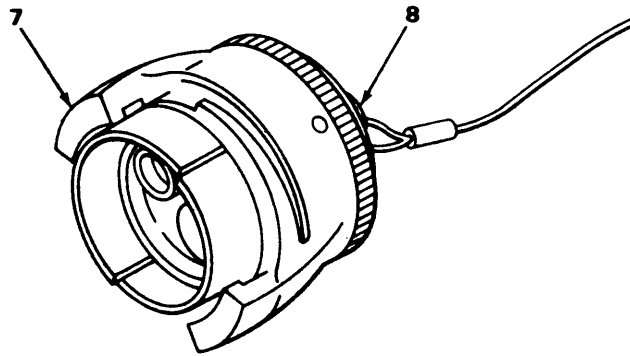
ITEM NO.	INTERVAL M	ITEM TO BE INSPECTED	PROCEDURES
1	●	Outer Jacket of Cable	Visually inspect outer windings of cable on each reel to make sure that the black plastic outer jacket is not damaged.
2	●	Connector UG-1870A/U	<p>Check for cracks in the main body insulator (1).</p> <p>Check for cracks in the front male insulator (2) or front female insulator (3).</p> <p>Check for dirty, greasy, or bent male (4) or female contacts (5).</p> <p>Check for missing or improperly seated non-metallic washer (6) on the face of the female body assembly.</p>



ORGANIZATIONAL PREVENTIVE MAINTENANCE CHECKS AND SERVICES (CONT)

M-MONTHLY

ITEM No.	INTERVAL M	ITEM TO BE INSPECTED	PROCEDURES
2 (cont)	●	Connector UG-1870A/U	Check for missing cap (7). Check for loose screw (8).

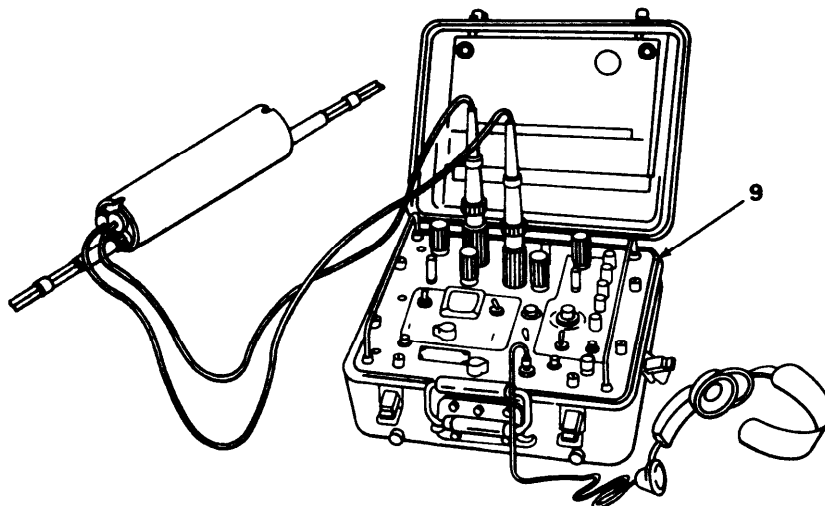


3

●

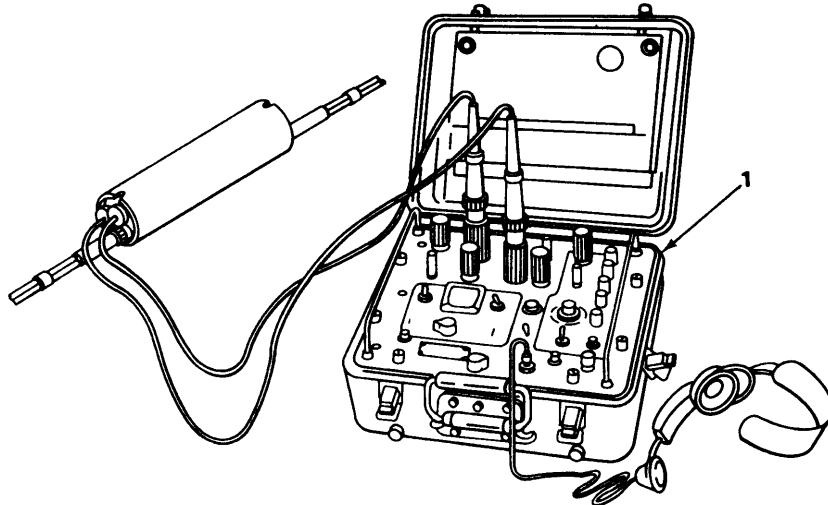
Cable Assembly,
Special Purpose,
Electrical
CX-11230A/G

Use Telephone Test Set AN/PTM-7 (9) to test twin coaxial cable assembly.



Section IV ORGANIZATIONAL TROUBLESHOOTING

GENERAL



WARNING

When you are troubleshooting, do not open any cable connections. Opening a connection can expose you to fatal shock by high voltage. If you find it necessary to remove or replace a component, or a piece of cable in the system, use your order wire hookup and call MUX equipment operators. Tell them to remove the power from the cable hookup.

Organizational troubleshooting of twin coaxial cable assemblies is limited to testing a PCM cable hookup of the following items using the telephone set (I):

- twin coaxial cable assemblies
- twin coaxial adapter cables
- unattended repeaters

Instructions in TM 11-6625-648-12 will tell you how to use the telephone test set to:

Locate faults in the PCM cable system.

Determine the location of an open circuit, or short circuit in the twin coaxial cable assembly, up to 1 mile away from where you connected the telephone test set.

Localize the trouble in an unattended repeater to one of the two circuit paths.

Provide order wire communications between the operator of the telephone test set and the MUX equipment operators.

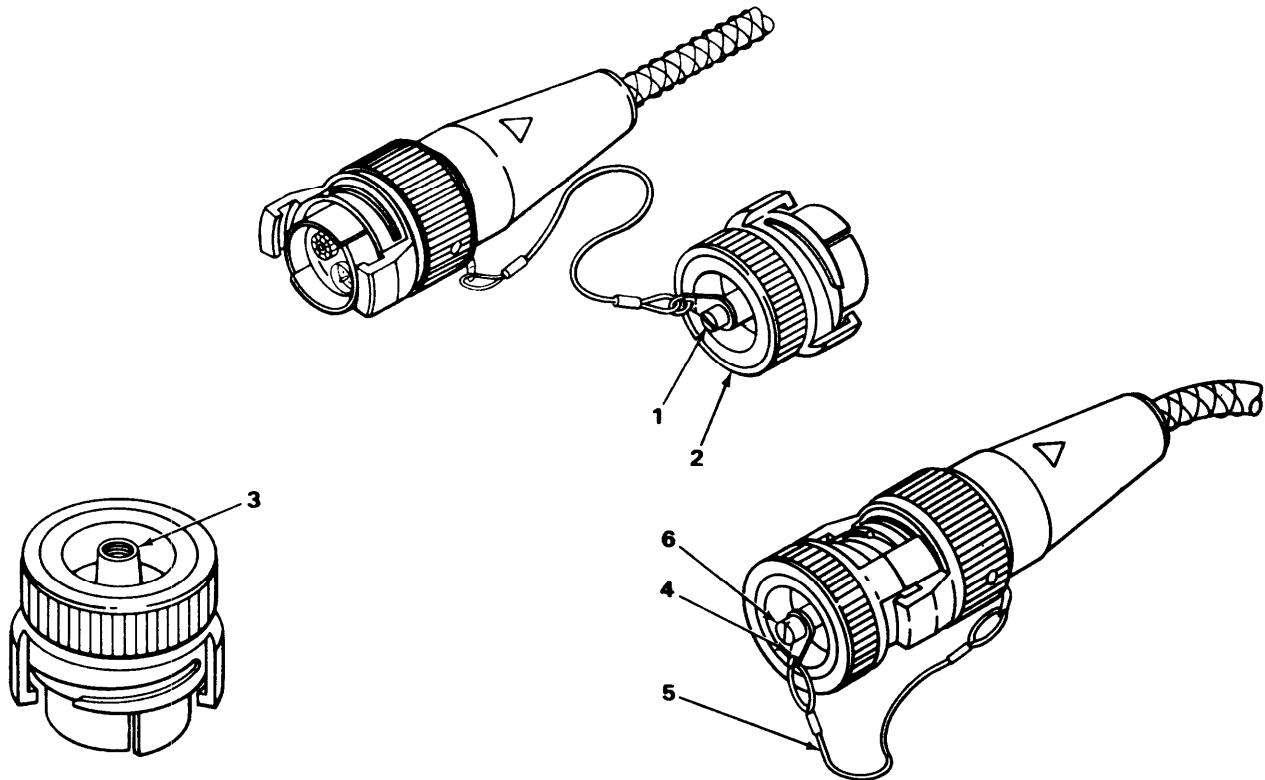
Section V ORGANIZATIONAL MAINTENANCE PROCEDURES

GENERAL

Organizational maintenance of the twin coaxial cable assembly is limited to replacing the capon connector UG-1870A/U and repairing outer plastic jacket.

CAP REPLACEMENT AND REPAIR

TOOLS: Electronic Equipment Tool Kit TK-101/G
MATERIALS/PARTS: Electrical cap (A3000760-2)
Loctite compound



1. Using flat-tip screwdriver, remove screw (1) from cap (2).

NOTE

On one model connector (type Bon page 3-2) a 5/16-inch socket wrench is necessary to remove this screw.

If a new cap is needed, replace old cap.

2. Place one drop of Loctite compound in threaded hole (3) of cap (2).

CAP REPLACEMENT AND REPAIR (CONT)

3. Position screw lug (4) with retaining wire (5) on back of cap (2).
4. Install screw (6).

NOTE

The work should be allowed to cure at room temperature for 24 hours.

OUTER PLASTIC JACKET REPAIR

TOOLS: Electronic Equipment Tool Kit TK-101/G

MATERIALS/PARTS: Flouriglass fabric tape (1-inch-wide)
Outer jacket material

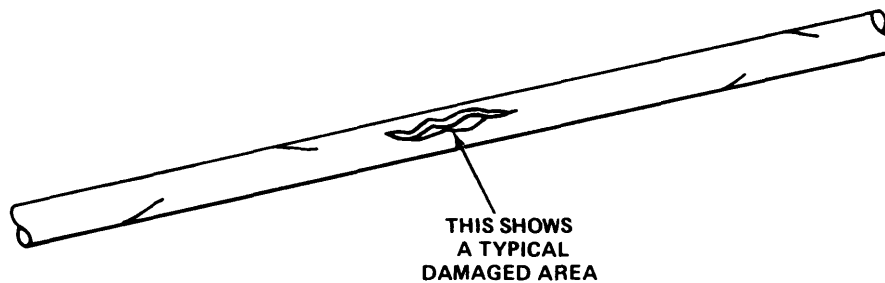
PERSONNEL REQUIRED: Two technicians

GENERAL

CAUTION

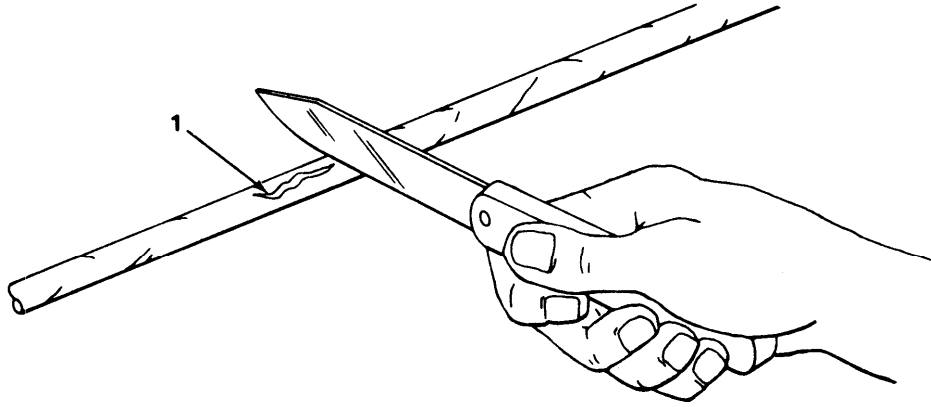
Repair of outer plastic jacket should be made only if cable shield is damaged.

This procedure is for repair of holes and openings in outer plastic jacket. It is not intended that repairs be made on areas more than 1 inch in length or over one-half the diameter of cable.



OUTER PLASTIC JACKET REPAIR (CONT)

REPAIR



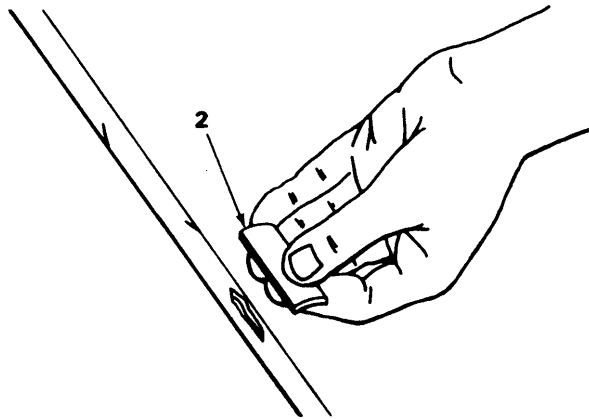
CAUTION

When removing damaged area of outer jacket, make sure you do not damage cable shield.

1. Using pocket knife, cut away damaged area (1).
2. Remove any dirt or burned material.

NOTE

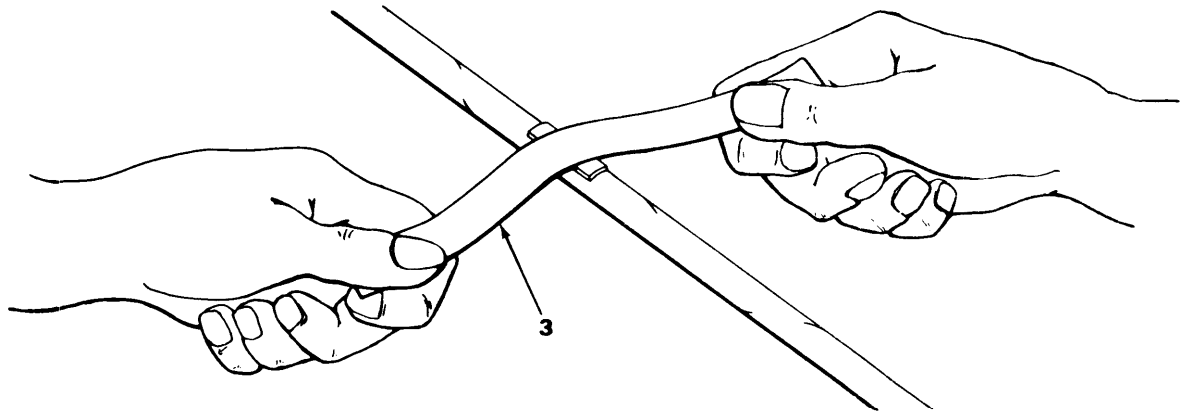
Determine if shield has been damaged. If there are shield ends protruding from a completely severed area, do not attempt to make a repair.



NOTE

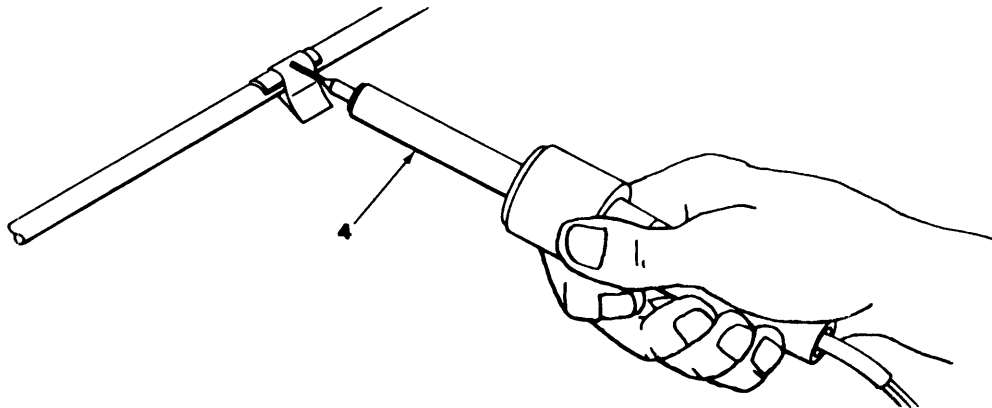
Material for repair of outer plastic jacket should be the same material as that on the cable. It should be available in your unit from an unrepairable section of cable. See your supply section and tell them what you need.

3. Place a piece of plastic jacket material, slightly larger than the cutaway area (2), over area to be repaired.

OUTER PLASTIC JACKET REPAIR (CONT)**NOTE**

Plastic material will shrink when heated to melting point. Flouriglass fabric tape serves to hold repair patch in place and helps to control the heat reaching the patch so that it does not melt too fast.

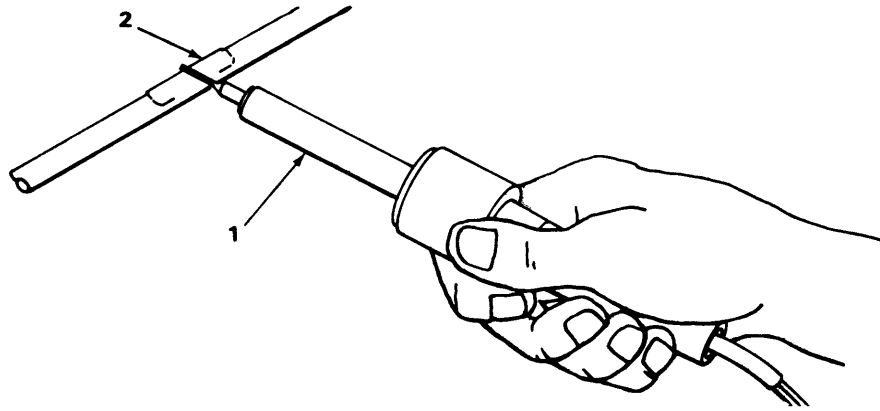
4. Wrap area to be patched with 1-inch-wide flouriglass fabric tape (3).

**NOTE**

Repaired area must be sufficiently heated to melt plastic jacket material. This action enables material to flow evenly over repaired area and fill hole.

5. Moving flat-tip soldering iron (4) in slow back and forth motion, heat repaired area.

OUTER PLASTIC JACKET REPAIR (CONT)



6. Remove flourglass fabric tape.

CAUTION

Use care when applying soldering iron to exposed cable.

NOTE

Applying a soldering iron to exposed cable brings the shine back to finished area, as well as evens it out.

7. Using rapid movements, apply a soldering iron (1) to finished area (2).

Section VI PREPARATION FOR STORAGE OR SHIPMENT

GENERAL

Storage of the twin coaxial cable assembly for any period of time requires careful planning. The storage area should be protected from the elements and drastic changes in temperature and humidity.

Before storing the cables on the reels, do all of the routine checks and services listed on page 2-4 and all of the items in the PMCS chart on pages 2-5 and 2-6.

WARNING

When stacking reels of cable, do not stack them too high. Stack them so that any member of the crew, tall or short, can safely handle the reels. Reels stacked too high or carelessly are a serious safety hazard.

NOTE

Never assume that the cables cannot become damaged while they are in storage.

After removing the cables from storage, do all of the items in the PMCS chart.

CHAPTER 3

GENERAL SUPPORT MAINTENANCE

Subject	Page
Common Tools and Equipment	3-1
Connector UG-1870A/U Replacement	3-3
General (Performance Standards)	3-32
General (General Support Maintenance Procedures)	3-2
General (General Support Troubleshooting)	3-1
Insulation Breakdown/Leakage Test	3-32
Repair Parts	3-1
Resistance Check	3-39
Special Tools, TMDE, and Support Equipment	3-1

Section I REPAIR PARTS; SPECIAL TOOLS; TEST, MEASUREMENT, AND DIAGNOSTIC EQUIPMENT (TMDE); AND SUPPORT EQUIPMENT

COMMON TOOLS AND EQUIPMENT

For authorized common tools and equipment, see appendix B, section III, Maintenance Allocation Chart (MAC).

SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

No special tools are authorized for use by general support maintenance. The TMDE and support equipment are listed in appendix B (MAC), section III.

REPAIR PARTS

Repair parts required for general support maintenance are listed and illustrated in appendix D.

Section II GENERAL SUPPORT TROUBLESHOOTING

GENERAL

The following troubleshooting procedures are provided to aid technicians in isolating faults in a defective cable.

1. Perform all PMCS items in chart on pages 2-5 and 2-6.
2. All cables passing the PMCS procedures will then undergo the insulation breakdown/leakage test, and the resistance check located in section IV of this chapter.

Section III GENERAL SUPPORT MAINTENANCE PROCEDURES

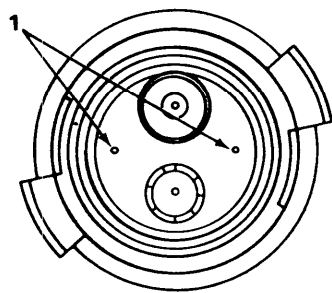
GENERAL

Maintenance of the twin coaxial cable assembly at the general support level is limited to the replacement of defective connector UG-1870A/U.

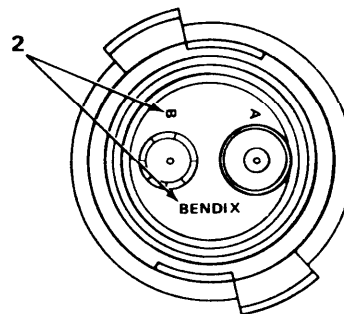
No splicing of the cable is authorized at any level of maintenance.

Minimum length of cable after replacement of the connector is 1220 feet for 1320-foot (1/4-mile) cable, and 90 feet for 100-foot cable.

Connectors are being supplied by two different manufacturers. Although electrically identical, they are configured differently. A separate assembly procedure is provided for each connector.



TYPE A



TYPE B

One connector (type A), which you will see most often, is marked with two small dots (1). The other connector (type B) has letter and word markings (2).

NOTE

Make sure you use the proper procedure for the connector you have received. Type A procedure starts on page 3-3; Type B procedure starts on page 3-18.

Special environmental conditions must be adhered to when performing all maintenance steps. Make sure the work area is free of drafts and dust.

CONNECTOR UG-1870A/U REPLACEMENT

TYPE A CONNECTOR

TOOLS: Refer to items 6 through 9 and 11 through 17 in appendix B (MAC), section III.

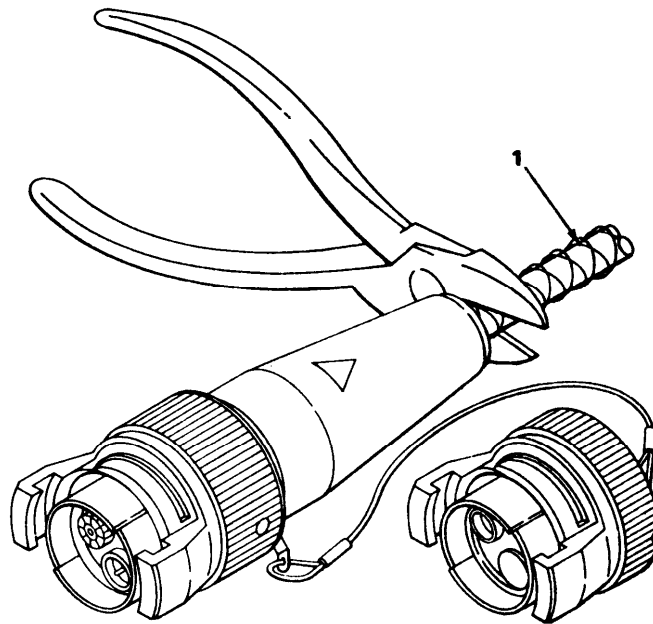
MATERIALS/PARTS: Connector UG-1870A/U kit

Masking tape

DC-4 silicone grease

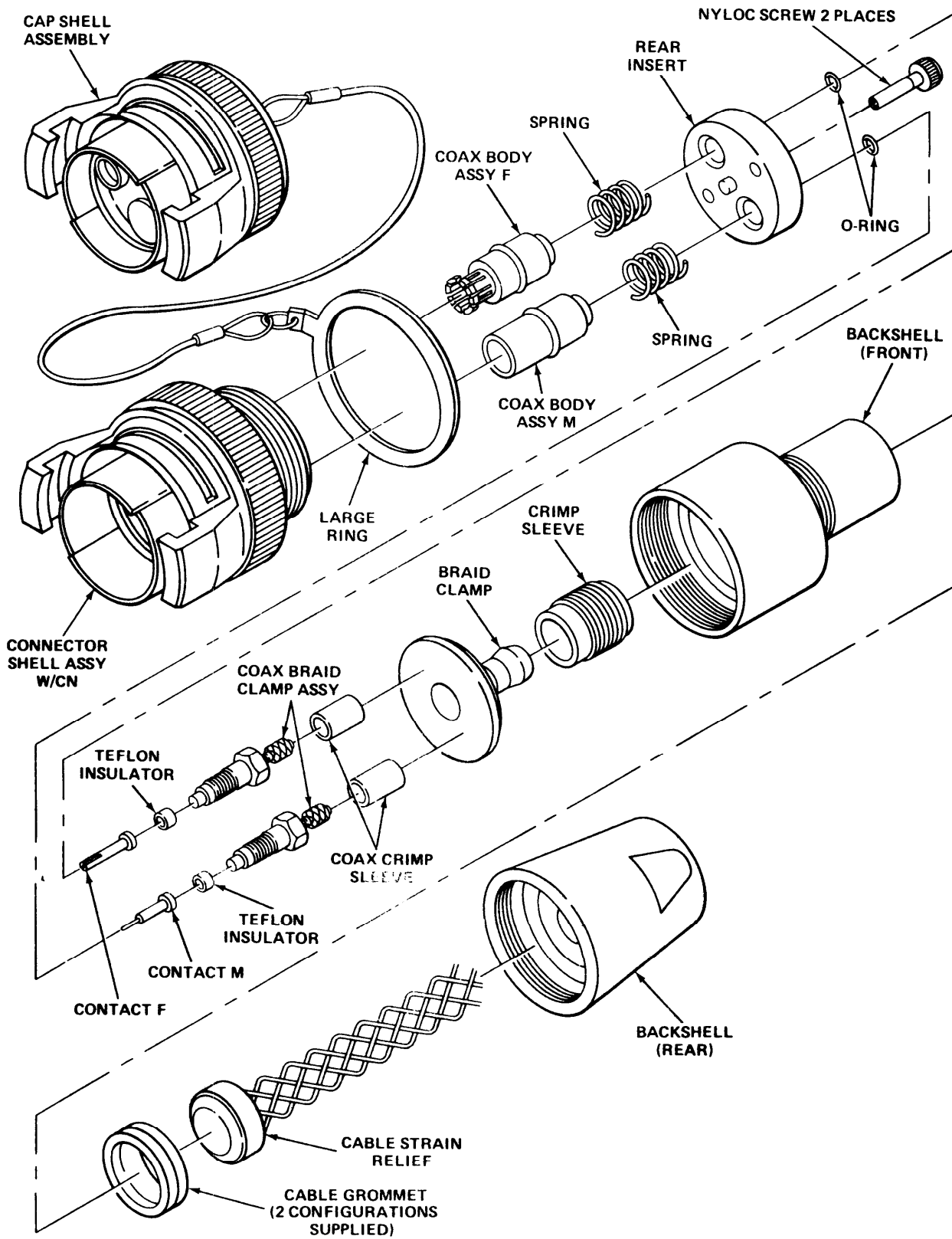
60/40 solder

PERSONNEL REQUIRED: Two technicians



1. Using wire cutters, snip cable (1) as close as possible to old connector. (Discard old connector.)

CONNECTOR UG-1870A/U REPLACEMENT (CONT)



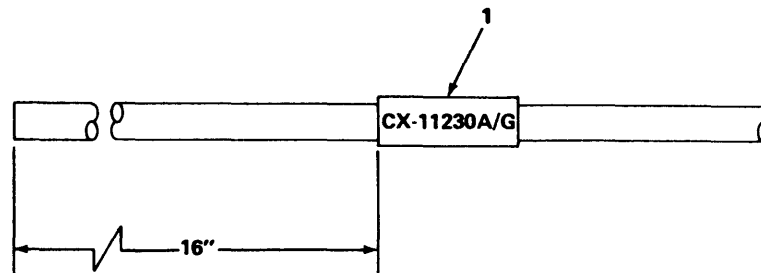
CONNECTOR UG-1870A/U REPLACEMENT (CONT)

CAUTION

Many parts are coated with sealants and lubricants. Do not remove these materials from parts.

When laying parts out, do not allow parts to become dirty. Place them in a clean tray or on a lint-free cloth.

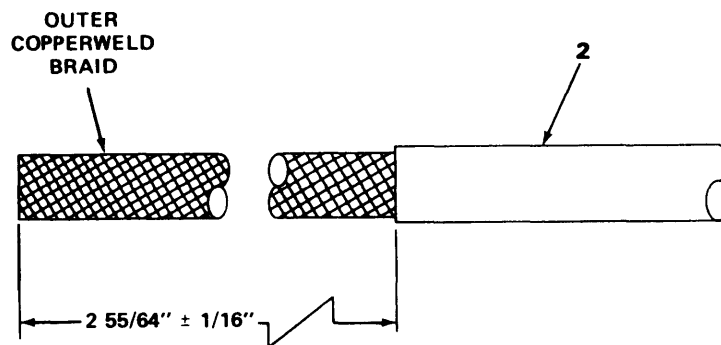
2. Lay out new connector parts as shown on previous page.



NOTE

The ID tag is in addition to original tag on cable, and is locally procured. The ID tag Should include: nomenclature, length, year and month, type of action, (i. e., OVH for overhaul) (repair of CX-11230A/G) by replacing connector UG-1870A/U; FAB for fabrication (making 100-foot lengths from 1/4-mile lengths); or SCR for screened (screening by a designated activity), and unit identification (who did the OVH, FAB, or SCR).

3. Place proper ID tag (1) over end of cable, and install it back at least 16 inches.

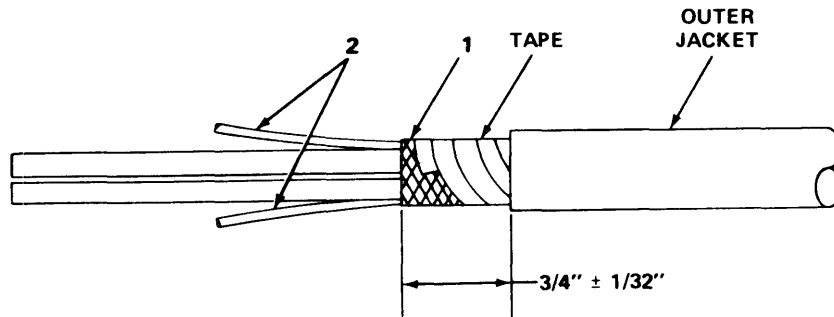


CAUTION

Be careful not to nick or cut outer copperweld braid when trimming outer jacket.

4. Trim outer jacket (2) to $2 \frac{55}{64} \pm \frac{1}{16}$ inches from cut end.

CONNECTOR UG-1870A/U REPLACEMENT (CONT)



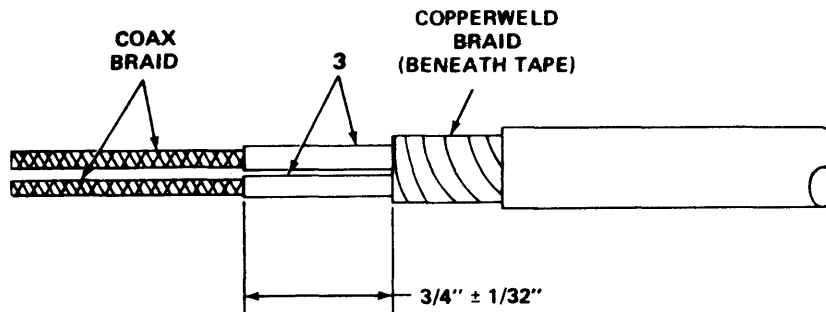
NOTE

Round WD-37A/U cable has fillers. Oval WD-37/U cable has no fillers.

A binder/RFI shield consisting of polyester-aluminum laminate tape is under outer braid. Trim this binder/RFI shield along with outer braid and fillers.

Binder/RFI shield and cable fillers should be trimmed flush with outer copperweld braid.

5. Trim outer copperweld braid (1) and cable fillers (2) to $3/4 \pm 1/32$ of an inch from outer jacket.
6. Wrap outer copperweld braid with masking tape.

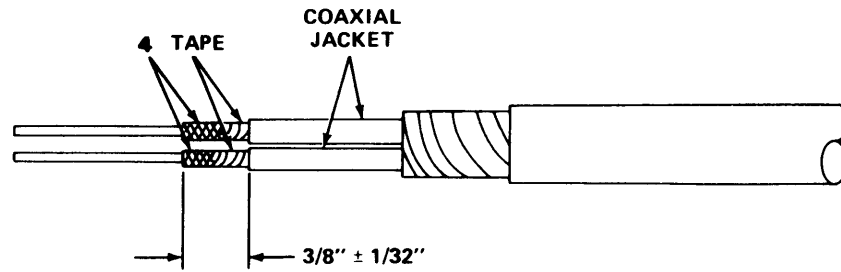


CAUTION

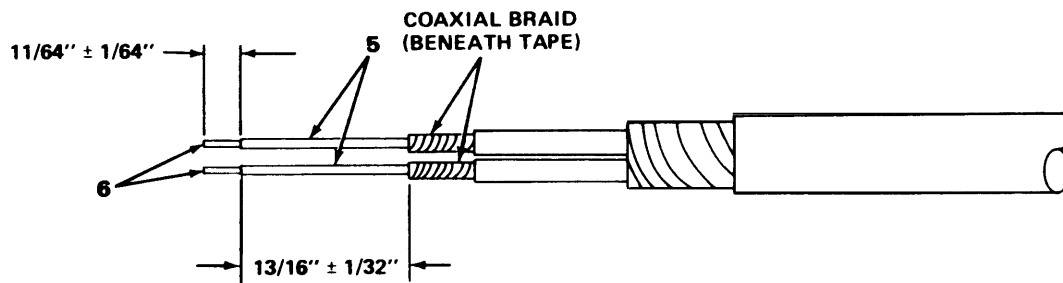
Be careful not to nick or cut coaxial braid when trimming coaxial jacket (3).

7. Trim coaxial jacket (3) $3/4 \pm 1/32$ of an inch from outer copperweld braid.

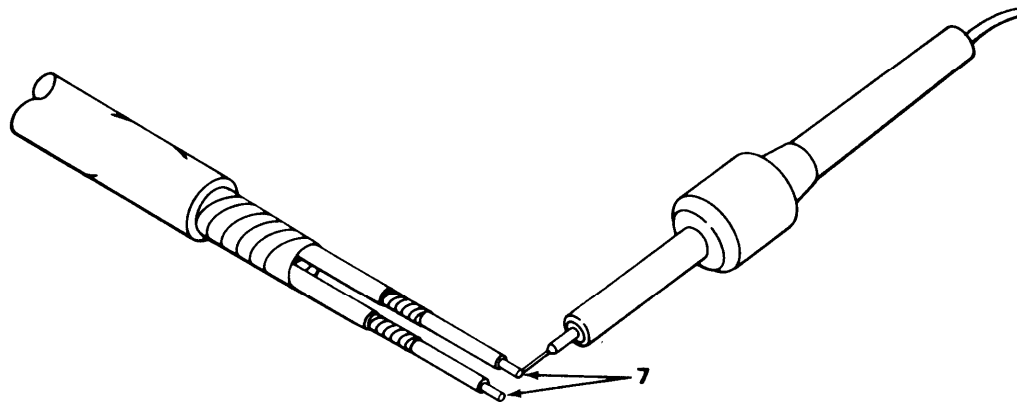
CONNECTOR UG-1870A/U REPLACEMENT (CONT)



8. Trim coaxial braid (4) $3/8 \pm 1/32$ of an inch from coaxial jacket.
9. Wrap braid with masking tape.

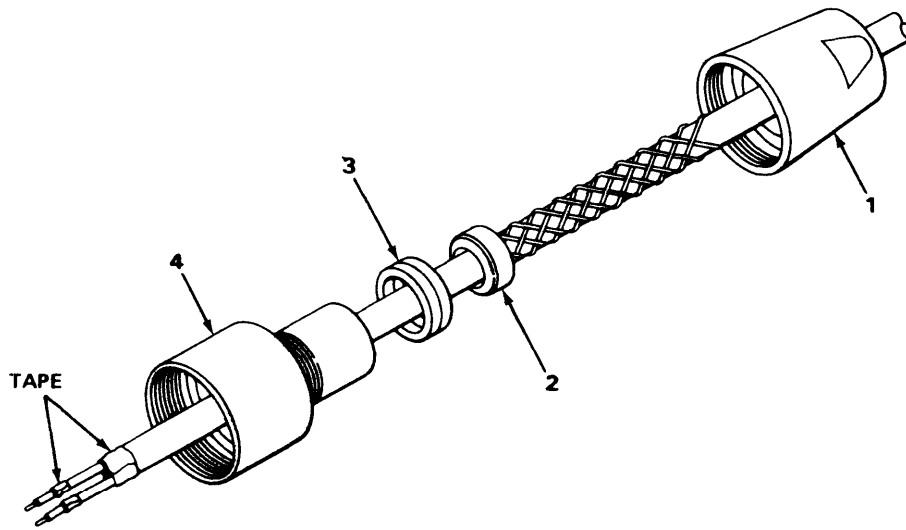


10. Trim coaxial dielectric (5) $13/16 \pm 1/32$ of an inch from coaxial braid, leaving coaxial center conductor (6) exposed $11/64 \pm 1/64$ of an inch.



11. Using 60/40 solder, tin two coaxial cable center conductors (7).

CONNECTOR UG-1870A/U REPLACEMENT (CONT)



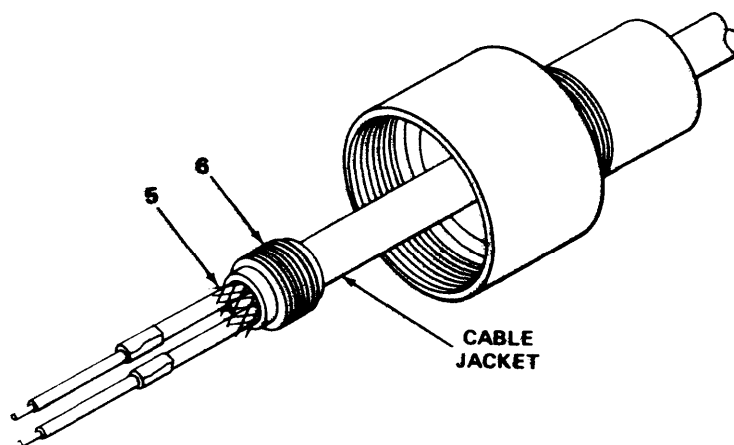
NOTE

Be sure to install proper cable grommet (3). There are two variations: one with a round hole for WD-37A/U cable and one with an oval hole for WD-37/U cable.

12. Install rear backshell (1), cable strain relief (2), cable grommet (3), and front backshell (4) on cable, and slide back out of the way.

NOTE

Make sure you complete steps 13 through 24 before crimping any of the crimp sleeves. This will allow you to retrim and regerminate cable, if cable is damaged during any of these steps.

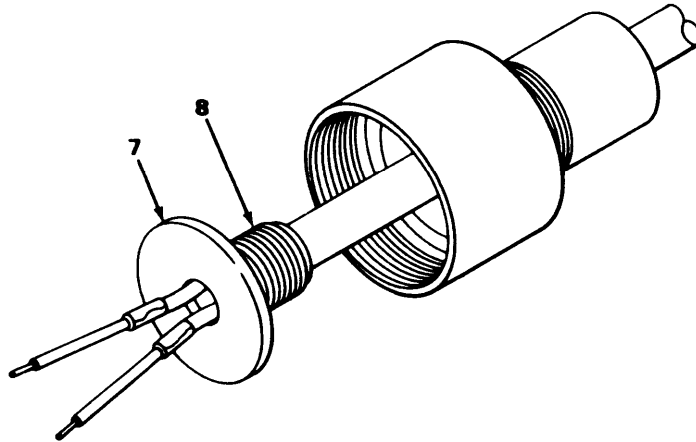


13. Remove tape from outer braid (5).

CONNECTOR UG-1870A/U REPLACEMENT (CONT)**NOTE**

If possible, slide crimp sleeve (6) onto cable jacket when installing it over outer braid (5). If crimp sleeve will not fit over cable jacket, [cave crimp sleeve over outer braid.

14. Install crimp sleeve (6) over outer braid (5), and onto jacket.

**CAUTION**

Be careful not to damage or bend braid strands when installing braid clamp (7).

NOTE

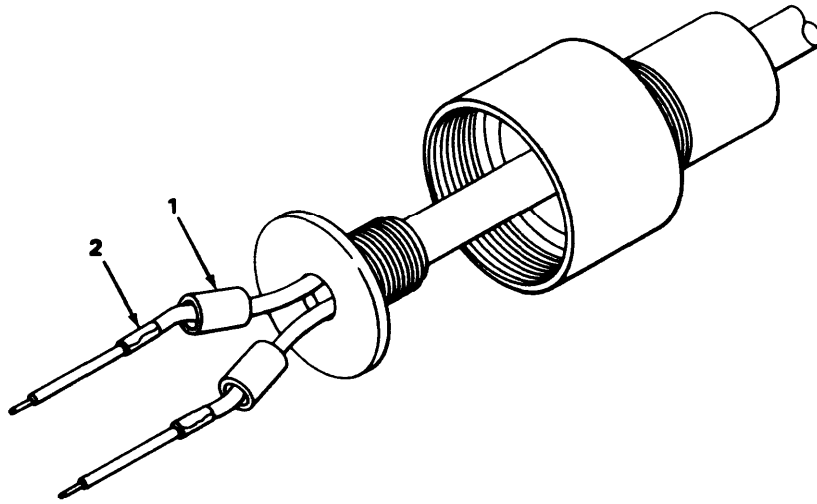
Braid clamp should be worked gently under outer braid, until it stops where braid comes out of trimmed cable jacket.

15. Install braid clamp (7) over both coaxial cables.
16. Slide crimp sleeve (8) onto braid (if this has not been done already).

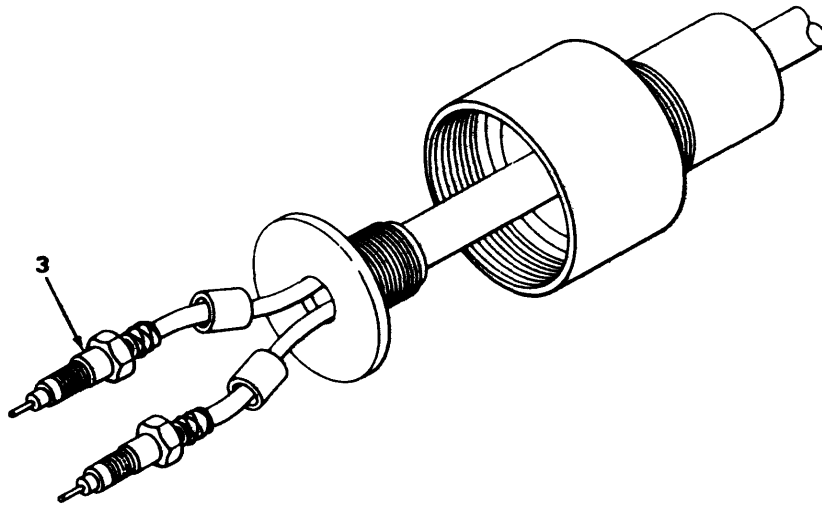
NOTE

Complete all termination steps from 17 through 24 on one coaxial line before terminating other coaxial line.

CONNECTOR UG-1870A/U REPLACEMENT (CONT)



17. Slide coaxial crimp sleeve (1) over taped coaxial braid (2) and onto coaxial jacket.
18. Remove tape from coaxial braid (2).



CAUTION

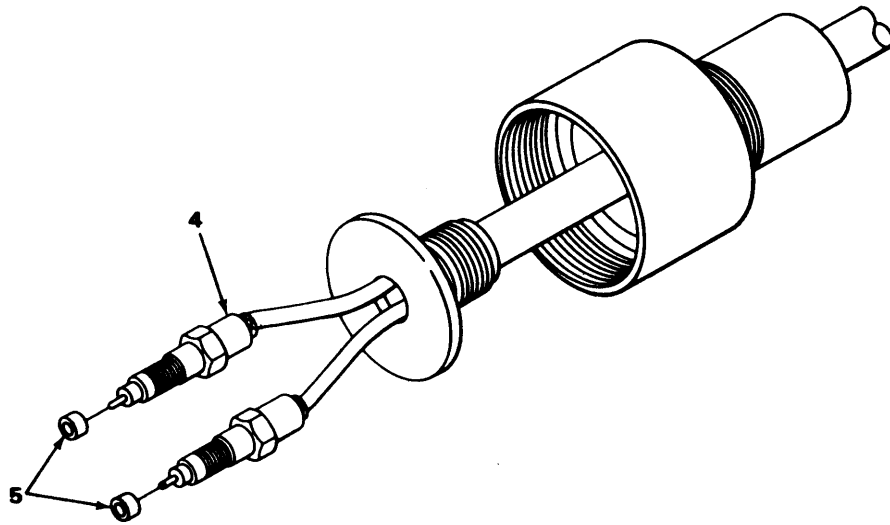
When installing coaxial braid clamp assembly (3), be careful not to damage or bend braid strands.

NOTE

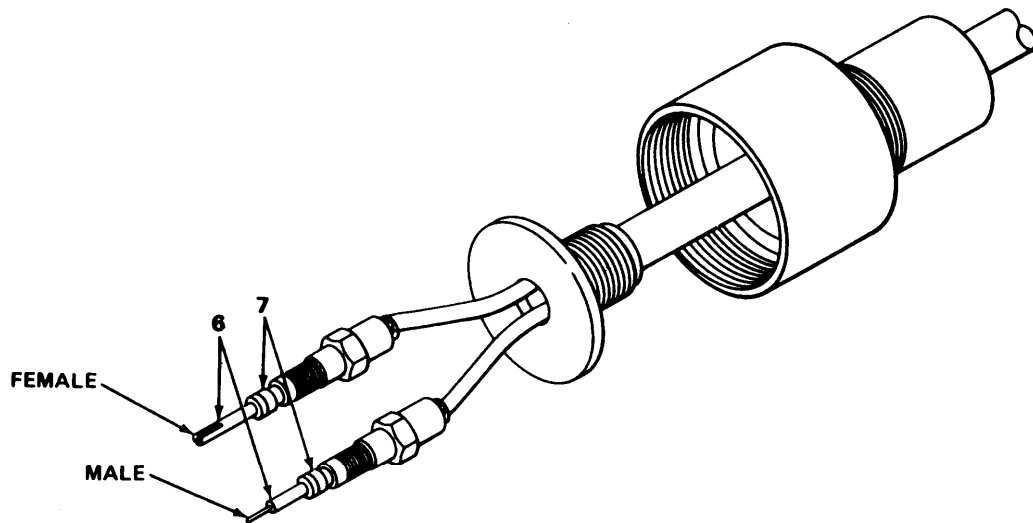
Make sure braid clamp assembly has been pushed under braid until it meets point where the braid comes out of trimmed coaxial jacket.

19. Install coaxial braid clamp assembly (3) onto coaxial dielectric.

CONNECTOR UG-1870A/U REPLACEMENT (CONT)



20. Slide crimp sleeve (4) onto braid.
21. Place teflon insulator (5) on remaining end of coaxial dielectric.

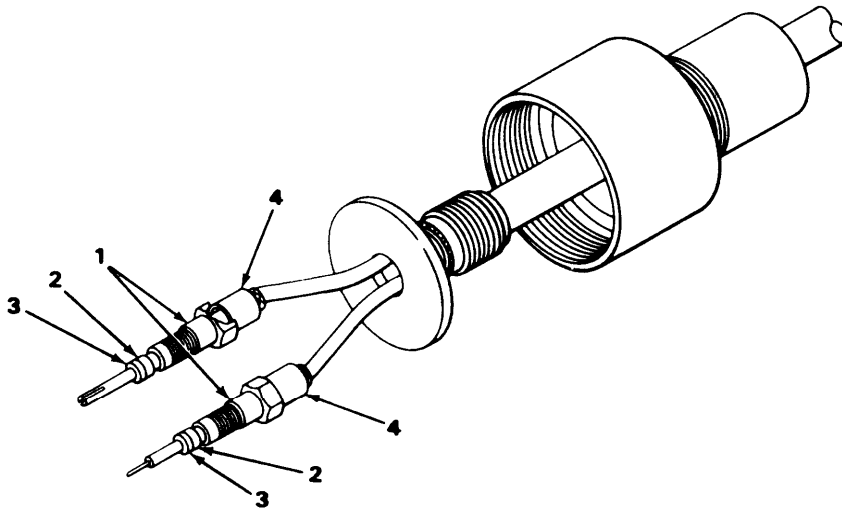
**NOTE**

If there is a complete connector assembly already assembled on the opposite end of cable, a continuity check must be performed to find out whether this end has a male or female contact. Each coaxial cable must have a male contact at one end and a female contact at the other end.

Be sure that center contact (6) is butted against teflon Insulator (7), when installing it on coaxial center conductor.

22. Install correct center contact (6) onto coaxial center conductor.
23. Using 60/40 solder, solder center contact (6).
24. Remove solder flux residue from center contact solder joint.
25. Repeat steps 18 through 24 on other coaxial line.

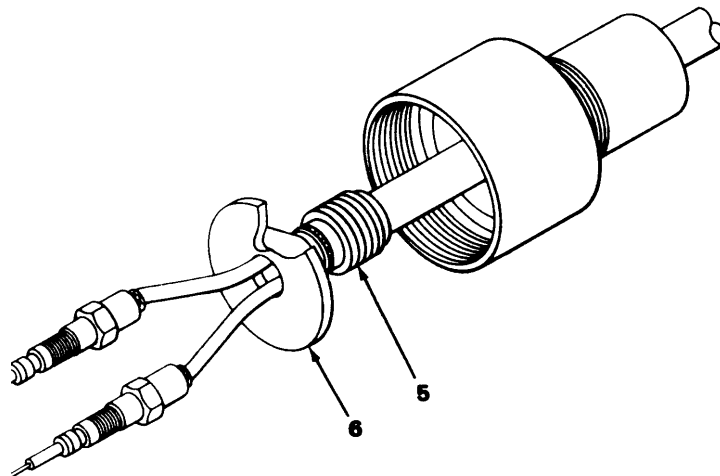
CONNECTOR UG-1870A/U REPLACEMENT (CONT)



CAUTION

Be careful when pushing coaxial braid clamp assembly (1) and teflon insulator (2) against flange (3) of center contact. Gentle force should be used.

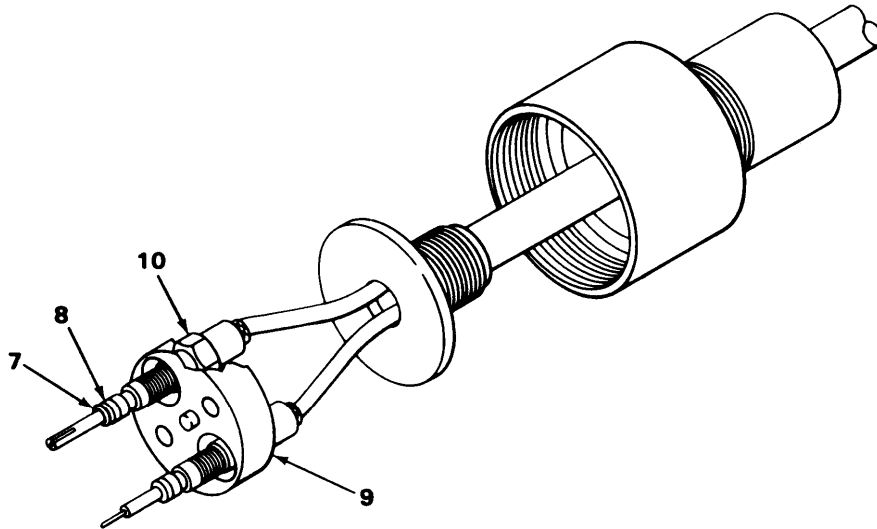
26. On each coaxial line, push coaxial braid clamp assembly (1) and teflon insulator (2) against flange (3) of center contact.
27. Position crimp sleeve (4) on one coaxial cable.
28. Using hex crimping tool (item 12, section 3, appendix B), crimp the crimp sleeve (4).
29. Repeat steps 27 and 28 on other coaxial line.



CONNECTOR UG-1870A/U REPLACEMENT (CONT)**NOTE**

Be sure braid clamp (6) is still fully under outer copperweld braid before crimping the crimp sleeve (5).

30. Position large crimp sleeve (5) flush against braid clamp (6).
31. Using hex crimping tool (item 13, section 3, appendix B), crimp the crimp sleeve (5).



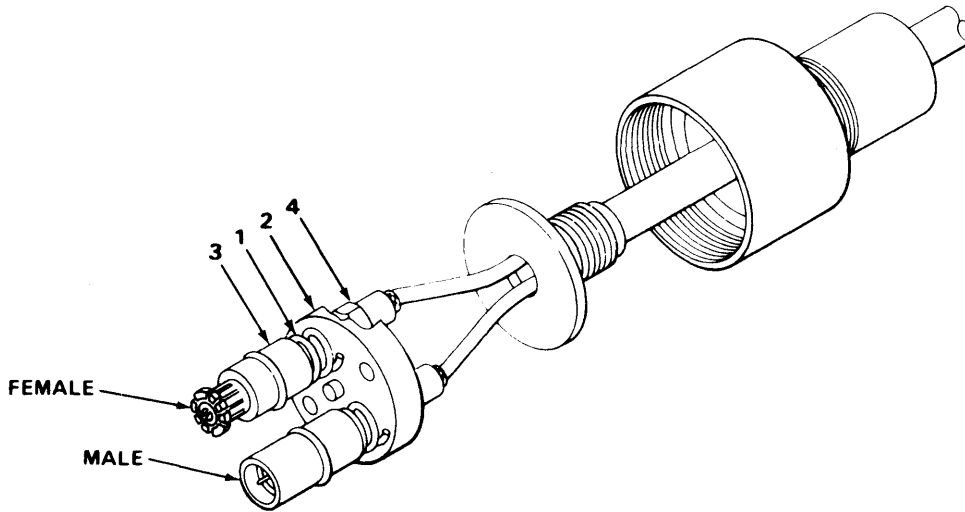
32. Install small O-ring (7) on each center contact against center contact flange (8).

NOTE

Be sure large counterbores of rear insert (9) are facing away from hexagonal clamp nut (10) of coaxial braid clamp assembly when installed.

33. Install rear insert (9) over both coaxial cables.

CONNECTOR UG-1870A/U REPLACEMENT (CONT)



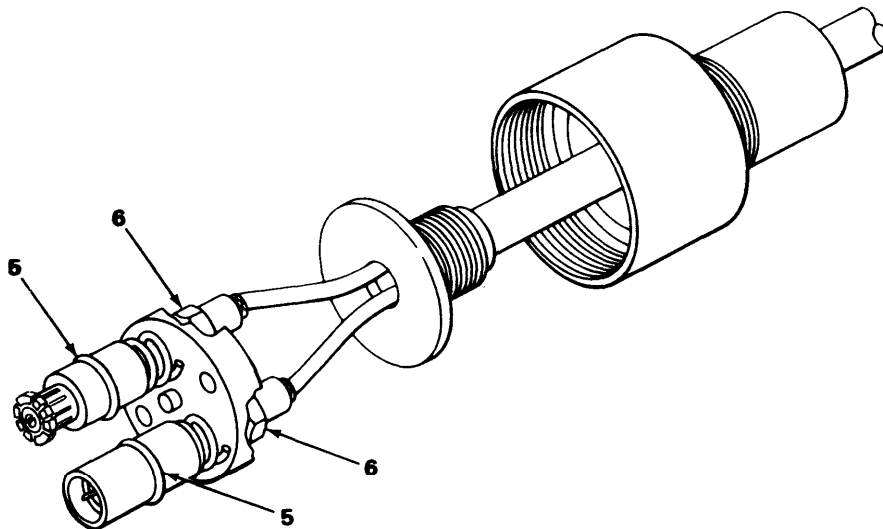
34. Install spring (1) onto one coaxial line, and into rear insert (2) counterbore.

NOTE

Be careful to install correct coaxial body assembly (3) on coaxial cable.

35. Screw corresponding coaxial body assembly (3) over center contact and onto coaxial braid clamp (4).

36. Repeat steps 34 and 35 on remaining coaxial line.

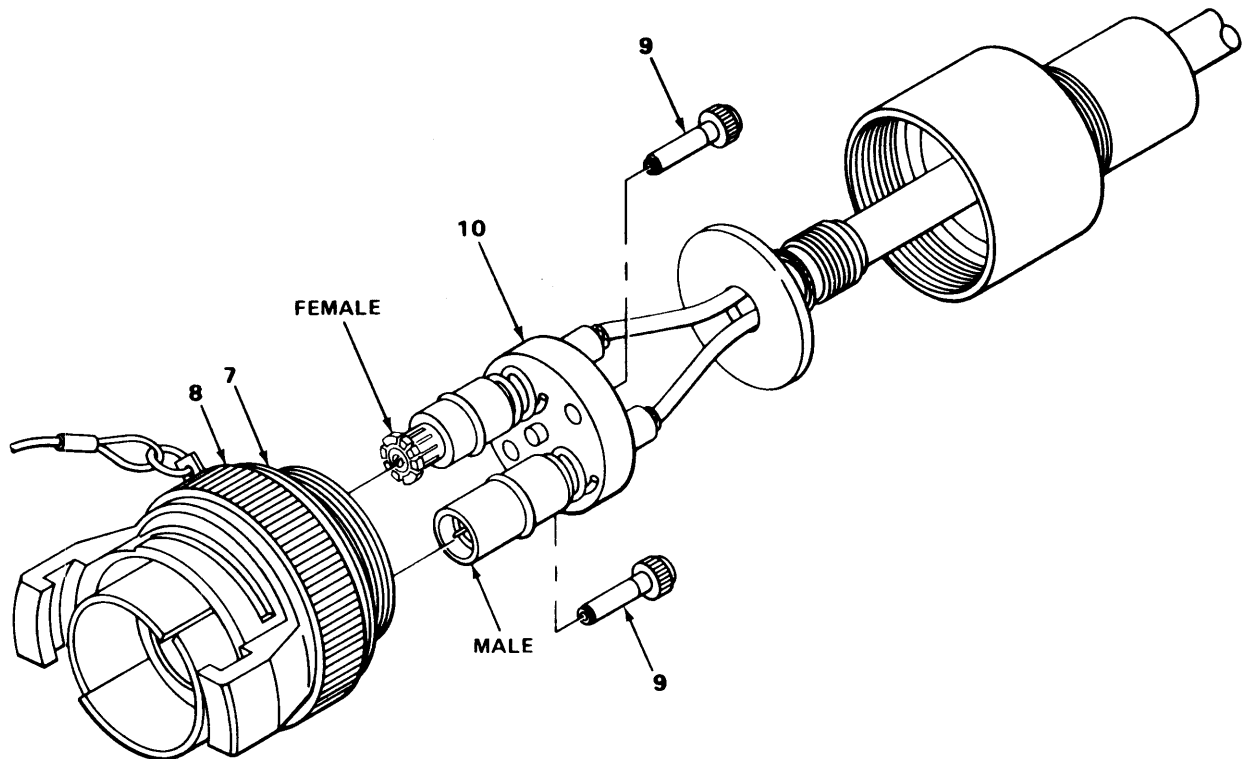


37. Using 3/8-inch open-end wrench, hold coaxial body (5) while tightening braid clamp nut (6) securely with 5/16-inch open-end wrench.

38. Repeat this step for other coaxial body

39. Using a torque wrench, torque each clamp nut (6) to 30-35 inch-pounds.

CONNECTOR UG-1870A/U REPLACEMENT (CONT)



NOTE

Be sure angled portion of large ring (7) faces front end of connector shell assembly (8) when installing.

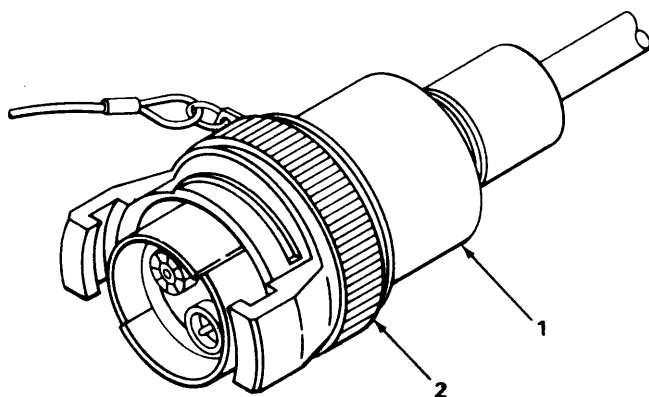
- 40. Install large ring (7) of cap shell assembly on connector shell assembly (8).
- 41. Insert nyloc screws (9) in rear insert (10).

NOTE

When installing rear insert (10), make sure male body assembly is inserted in connector shell (8) insert hole that has larger opening in face seal. Make sure also that both coaxial contacts are through face seal, and rear insert (10) butts against connector shell (8) insert.

- 42. Install rear insert (10) into rear of connector shell assembly (8).
- 43. Using a 3/32-inch internal socket wrench, tighten two nyloc screws (9) until they are seated.
- 44. Using a torque wrench, torque each nyloc screw (9) to 3-5 inch-pounds.

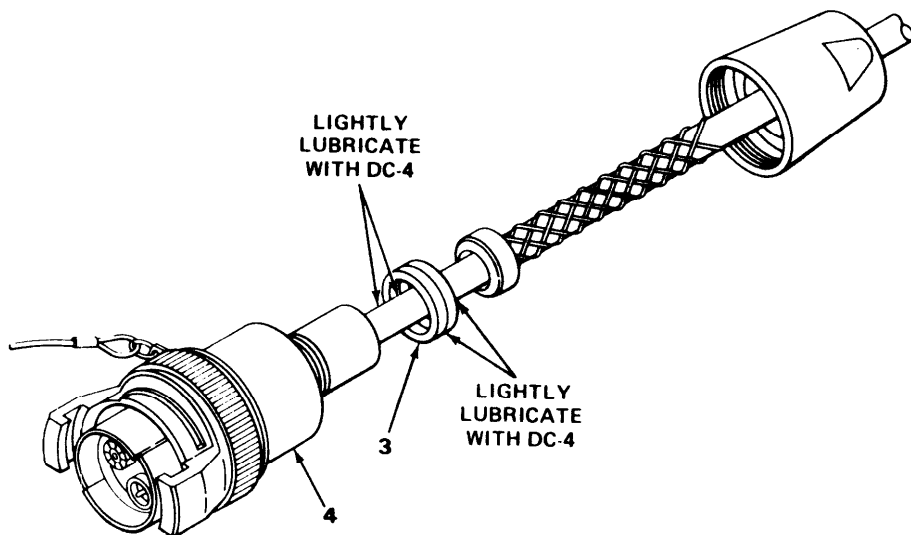
CONNECTOR UG-1870A/U REPLACEMENT (CONT)



NOTE

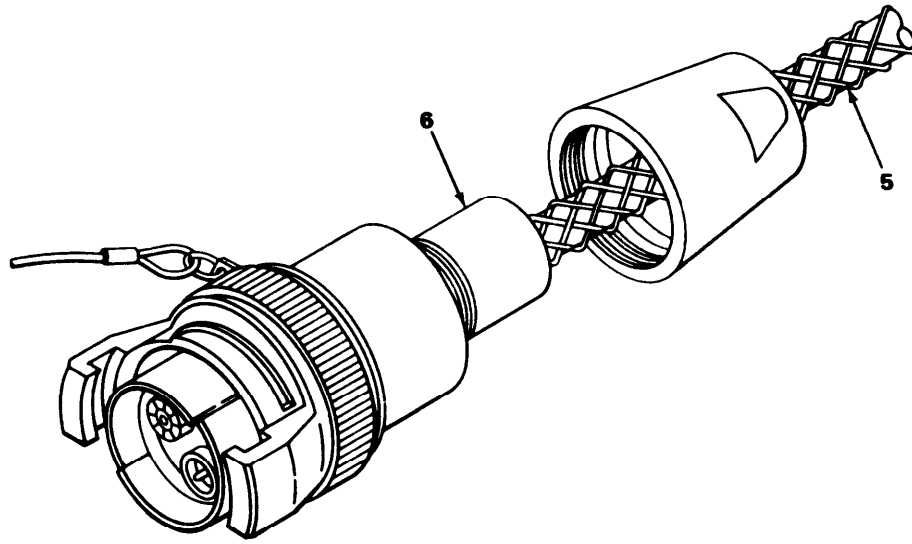
To aid in the following steps, mate connector shell assembly (2) to another connector shell assembly.

45. Slide backshell (1) up, and onto connector shell assembly (2) until it seats solidly.

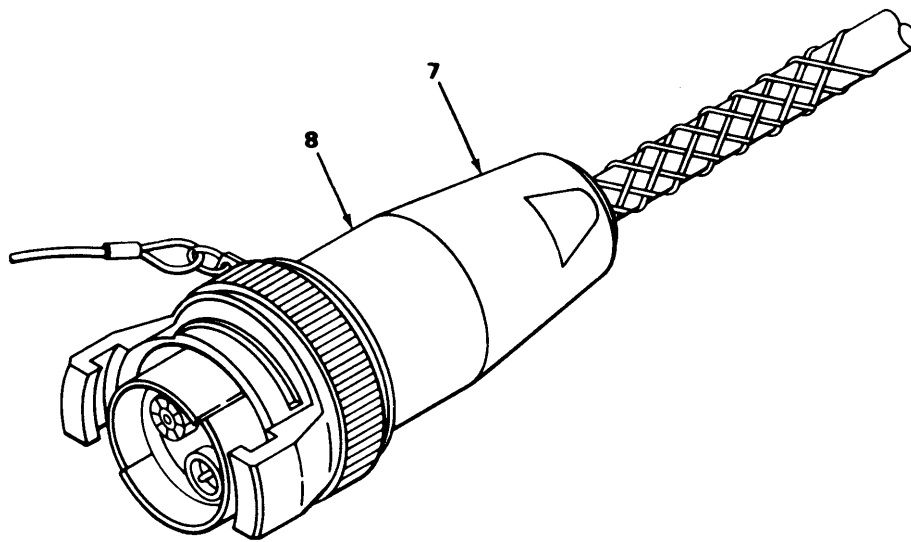


46. Using DC-4 silicone grease, lightly lubricate all exposed surfaces of cable grommet (3) and section of cable jacket inside front backshell's tube end (4).
47. Push grommet (3) into front backshell (4) until it bottoms.

CONNECTOR UG-1870A/U REPLACEMENT (CONT)



48. Push cable strain relief (5) into front backshell (6) until it butts against grommet.



- 49. Handtighten rear backshell (7) onto front backshell (8).
- 50. Using a 1 1/8-inch open-end wrench, tighten rear backshell (7) until it seats solidly against front backshell (8).
- 51. Using a torque wrench, torque rear backshell to 280-300 inch-pounds.

CONNECTOR UG-1870A/U REPLACEMENT (CONT)

TYPE B CONNECTOR

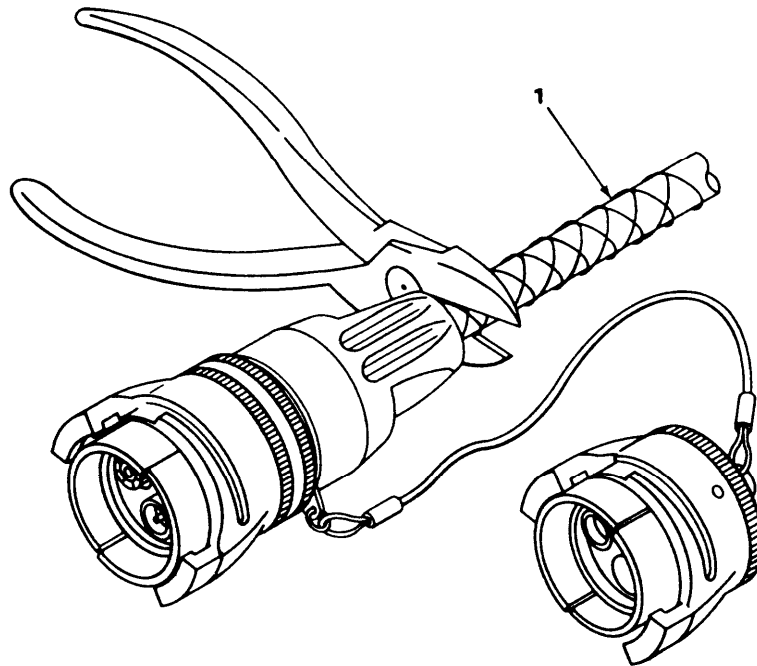
TOOLS: Refer to items 10, 14, and 18 through 21 in appendix B (MAC), section III.

Connector UG-1870A/U kit

60/40 solder

MATERIALS/PARTS: Masking tape

PERSONNEL: Two technicians



1. Using wire cutters, snip cable (1) as close as possible to old connector. (Discard old connector.)

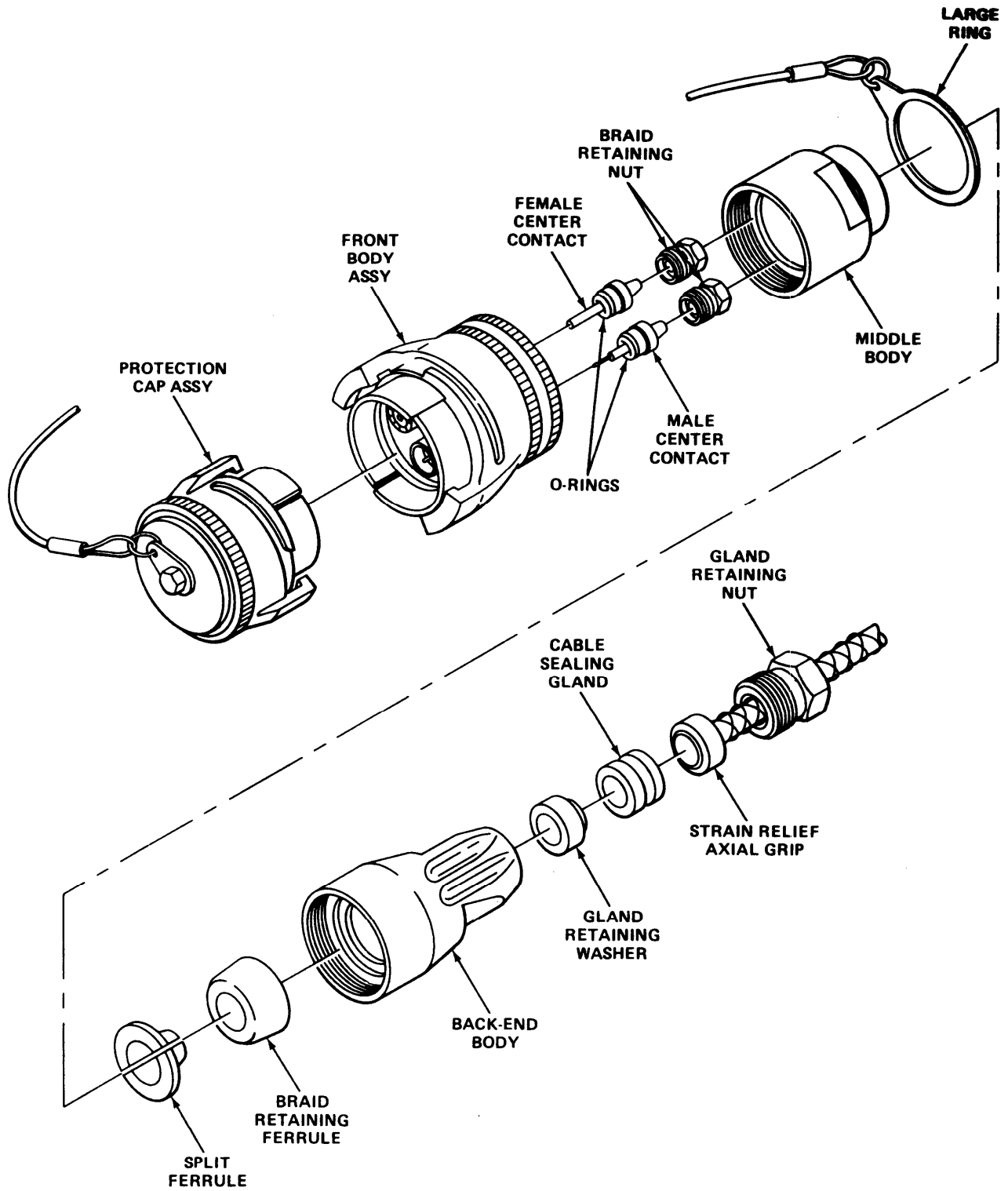
CAUTION

Many parts are coated with sealants and lubricants. Do not remove these materials from parts.

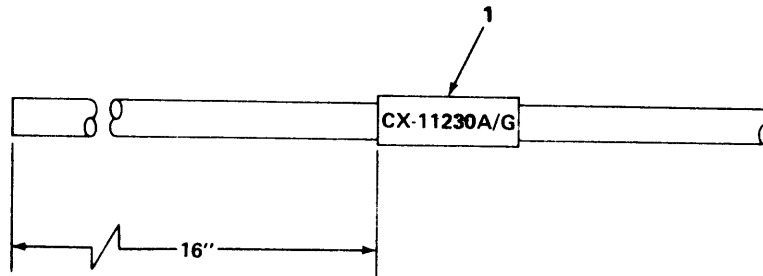
When laying parts out, do not allow parts to become dirty. Place them in a clean tray or on a lint-free cloth.

2. Lay out parts as shown in following illustration

CONNECTOR UG-1870A/U REPLACEMENT (CONT)



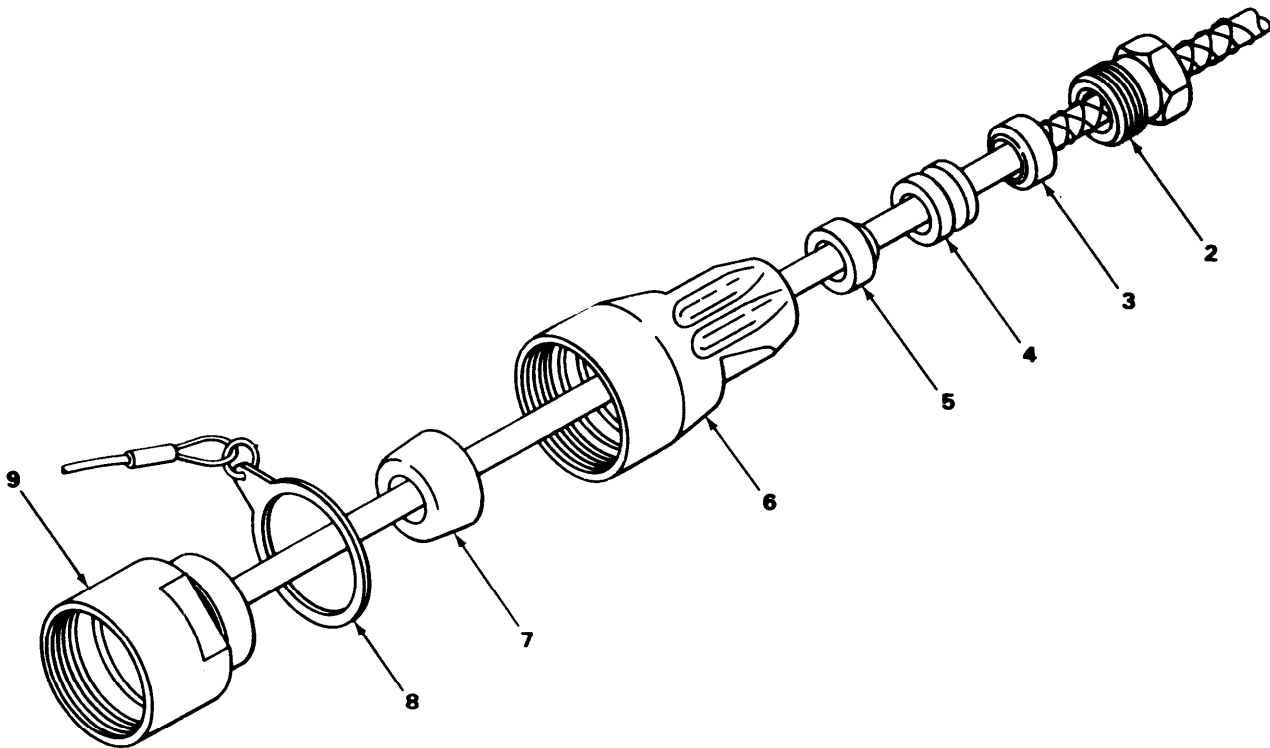
CONNECTOR UG-1870A/U REPLACEMENT (CONT)



NOTE

The ID tag is in addition to original tag on cable, and is locally procured, The ID tag should include: nomenclature, length, year and month, type of action, (i. e., OVH for overhaul) (repair of CX-11230A/G) by replacing connector UG-1870A/U; FAB for fabrication (making 100-foot lengths from 1/4-mile lengths); or SCR for screened (screening by a designated activity) and unit identification (who did the OVH, FAB, or SCR).

3. Place proper ID tag (1) over end of cable, and install it back at least 16 inches.



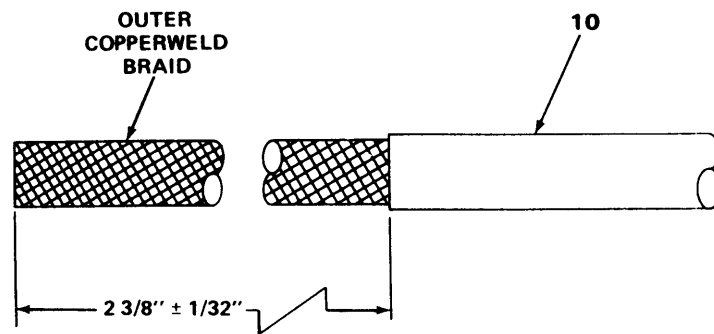
CONNECTOR UG-1870A/U REPLACEMENT (CONT)**NOTE**

Be sure to install correct cable sealing gland (4). There are two variations: one with a round hole for WD-37A/U cable, and one with an oval hole for WD-37/U cable.

Large ring (8) should be installed with angled portion facing front of connector.

Be sure a sealing grommet is inside middle body (9) before installing.

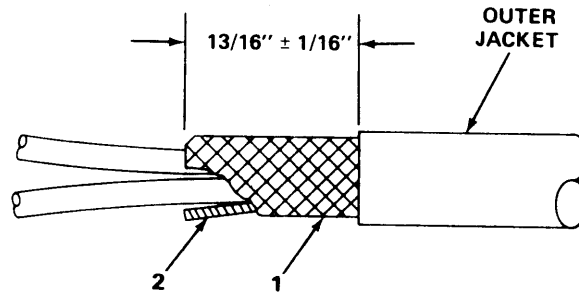
- Slide gland retaining nut (2), strain relief axial grip (3), cable sealing gland (4), gland retaining washer (5), back-end body (6), braid retaining ferrule (7), large ring (8), and middle body (9) onto cable, and back out of the way.

**CAUTION**

Be careful not to nick or cut outer copperweld braid.

- Trim outer cable jacket (10) to $2 \frac{3}{8} \pm 1/32$ inches from the cut end of cable.

CONNECTOR UG-1870A/U REPLACEMENT (CONT)



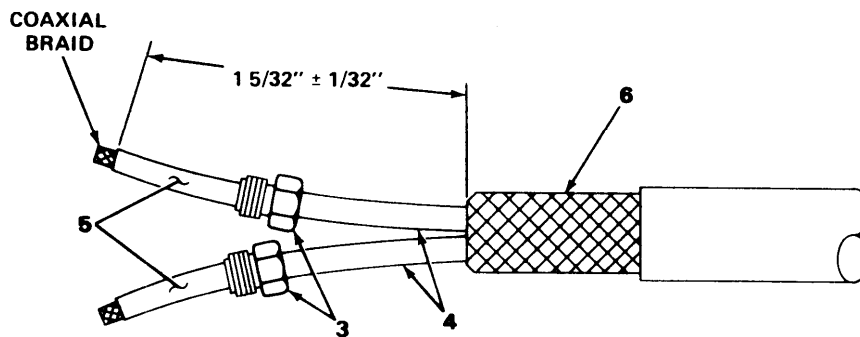
NOTE

Round WD-37A/U cable has fillers. Oval WD-37/U cable has no fillers.

A binder/RFI shield consisting of polyester-aluminum laminate tape is under outer braid. Trim this binder/RFI shield along with outer braid and fillers.

Binder/RFI shield and cable fillers should be trimmed flush with outer copperweld braid.

6. Trim outer copperweld braid (1) and cable fillers (2) to $13/16 \pm 1/16$ of an inch from outer cable jacket.



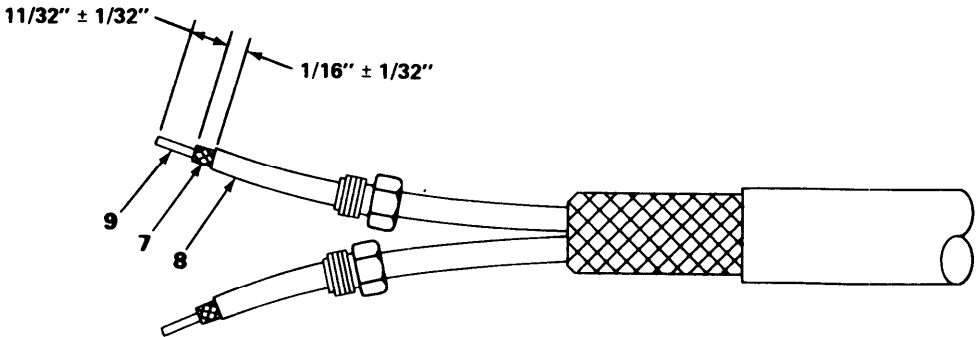
7. Slide braiding retaining nut (3) over both coaxial cables (4), and push them back out of the way.

CAUTION

Be careful not to nick or cut coaxial braid.

8. Trim coaxial jacket (5) $15/32 \pm 1/32$ inches from outer copperweld braid (6).

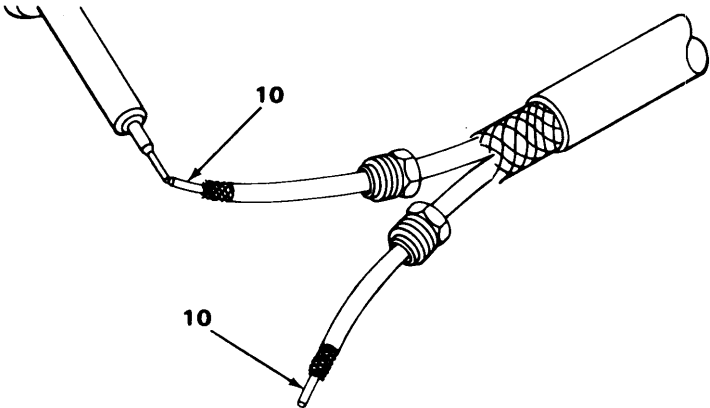
CONNECTOR UG-1870A/U REPLACEMENT (CONT)



CAUTION

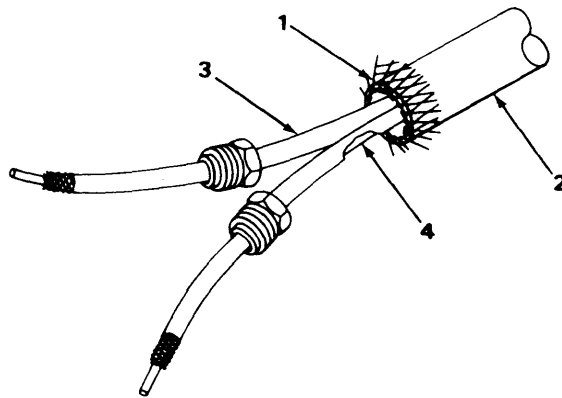
Be careful not to nick or cut center conductor (9).

- 9. Trim coaxial braid (7) $1/16 \pm 1/32$ of an inch from coaxial jacket (8), leaving $11/32 \pm 1/32$ of an inch of center conductor (9) exposed.



- 10. Using 60/40 solder, pre-tin center conductors (10).

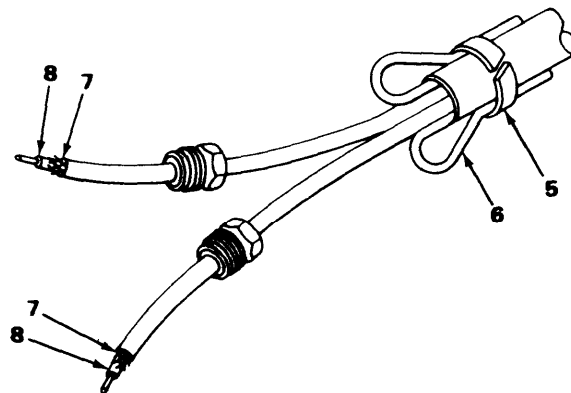
CONNECTOR UG-1870A/U REPLACEMENT (CONT)



NOTE

In order to meet cable retention requirements of final assembly, it is important that after combing out outer copperweld braid, the folding back operation must be performed in groups of four strands. One group should not cross the next as they are folded over outer cable jacket (2).

11. Comb out outer copperweld braid (1), and fold back over outer cable jacket (2).
12. Remove binder/RFI shields (3), allowing 1/16 of an inch maximum of foil wrap to extend from copperweld braid (1).
13. Comb out cable fillers (4), splaying out and folding back equally over outer copperweld braid (1).



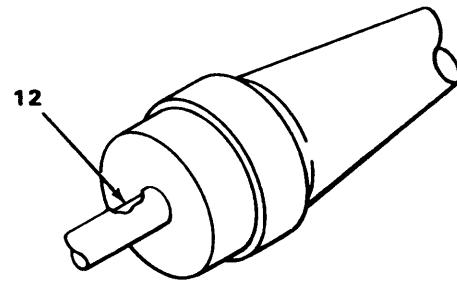
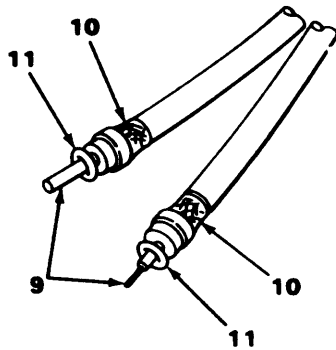
14. Using masking tape (5), tape down outer copperweld braid strands and paper fillers (6).

NOTE

Be sure no coaxial braid strands (7) lay against forward end of dielectric (8), when flaring inner cable coaxial braids (7).

15. Slightly flare inner cable coaxial braids (7) away from dielectrics (8).

CONNECTOR UG-1870A/U REPLACEMENT (CONT)



NOTE

If there is a complete connector assembly already assembled on the opposite end of cable, then a continuity check must be performed. A coaxial cable must have a male contact at one end and a female contact at other end.

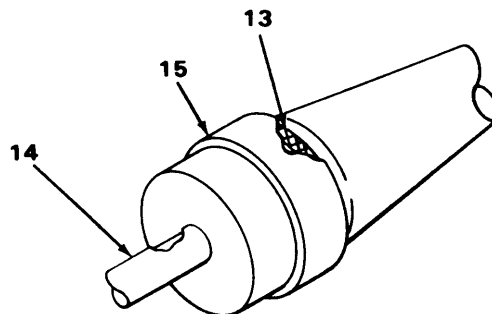
16. Slide proper center contact (9) over dielectric and under flared coaxial braid (10).

NOTE

If O-ring (11) stays with either contact, remove it before going to step 17.

Center conductor should be visible through contact solder and inspection hole (12) before soldering.

17. Using 60/40 solder, solder center conductor to contact (9) through solder and inspection hole (12).
18. Remove excess solder from solder hole (12), and replace O-ring (11) if required.

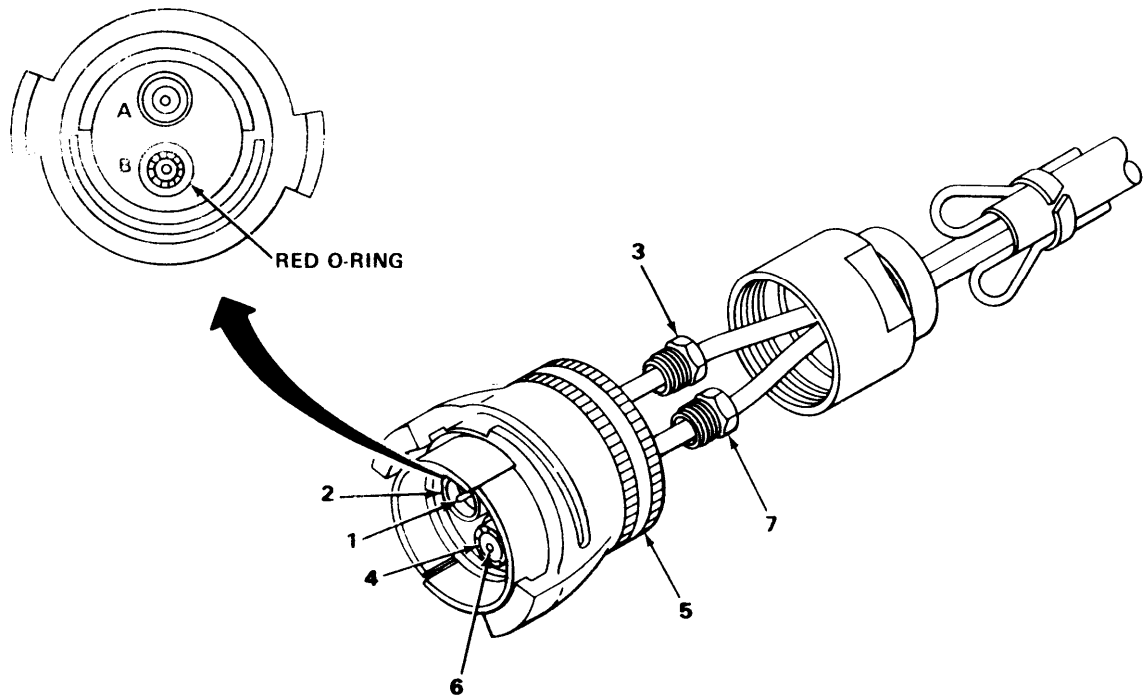


NOTE

Be sure that no strand of braid (13) is left outside center contact (14).

19. Trim coaxial braid (13) on each coaxial cable flush against flange (15) of center contact (14).

CONNECTOR UG-1870A/U REPLACEMENT (CONT)



- 20. Insert male center contact (1) into outer contact marked A (2).
- 21. Install braid retaining nut (3) into male center contact (1).

NOTE

Braid retaining nut (3) should bottom on rear of contact when torqued.

- 22. Using a torque wrench, torque braid retaining nut (3) to 15-20 inch-pounds.

NOTE

Be sure that red O-ring is installed on outer contact (4) of front body assembly (5) before installing female contact (6) into outer contact.

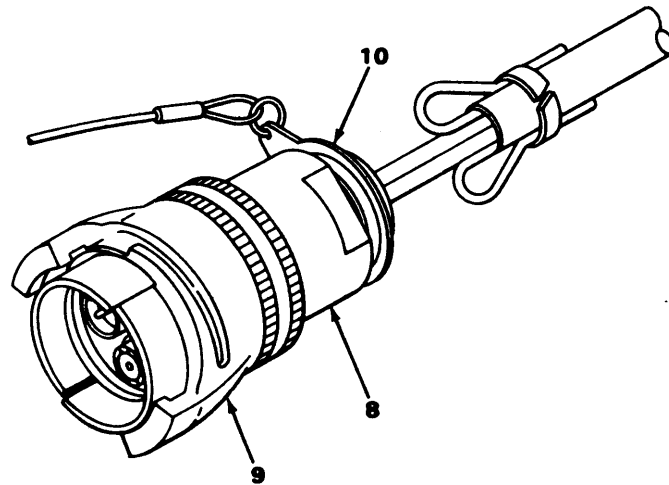
- 23. Install female center contact (6) into outer contact marked B (4).
- 24. Thread braid retaining nut (7) into female center contact (6).

NOTE

Braid retaining nut (7) should bottom on rear of contact when torqued.

Using a torque wrench, torque braid retaining nut (7) to 15-20 inch-pounds.

CONNECTOR UG-1870A/U REPLACEMENT (CONT)



NOTE

Check that sealing grommet is in front body assembly (9).

28. Thread middle body (8) into front body assembly (9) using 1/4-inch flats.

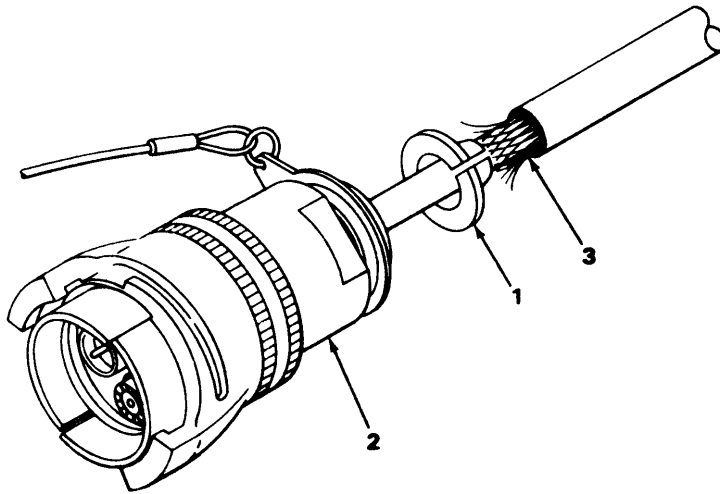
NOTE

Mating connector will be required when tightening middle body (8).

27. Using torque wrench, tighten middle body (8) to 80-85 inch-pounds.

28. Slide large ring (10) on to middle body (8).

CONNECTOR UG-1870A/U REPLACEMENT (CONT)



- 29. Install split ferrule (1) into middle body (2).
- 30. Pull slightly on cable.

NOTE

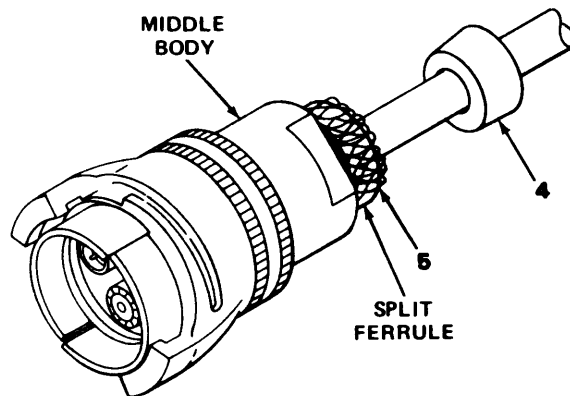
Twisting cable 360° makes inner cables come together. This, in turn, allows split ferrule (1) to seat better in middle body (2).

- 31. Twist cable 360°.

NOTE

Copperweld braid and cable fillers (3) should extend over edge of middle body (2) when tape is removed.

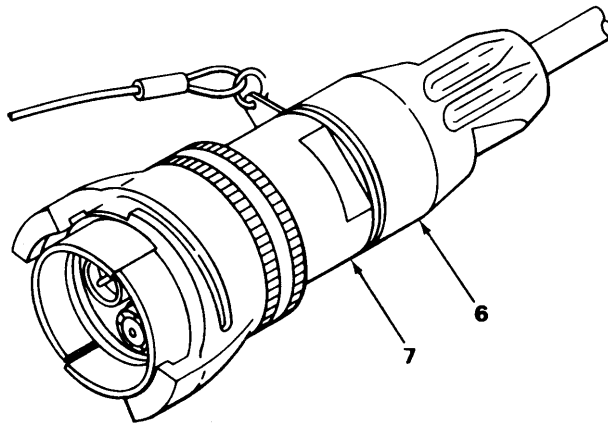
- 32. Remove tape from combed out copperweld braid and splayed cable fillers (3).



CONNECTOR UG-1870A/U REPLACEMENT (CONT)**NOTE**

Outer copperweld braid and cable fillers (5) should extend into middle body and over split ferrule when installing braid retaining ferrule (4).

33. Push braid retaining ferrule (4) over copperweld braid and cable fillers (5), and into middle body.

**NOTE**

Be careful not to crossthread back-end body (6) onto middle body (7) when installing.

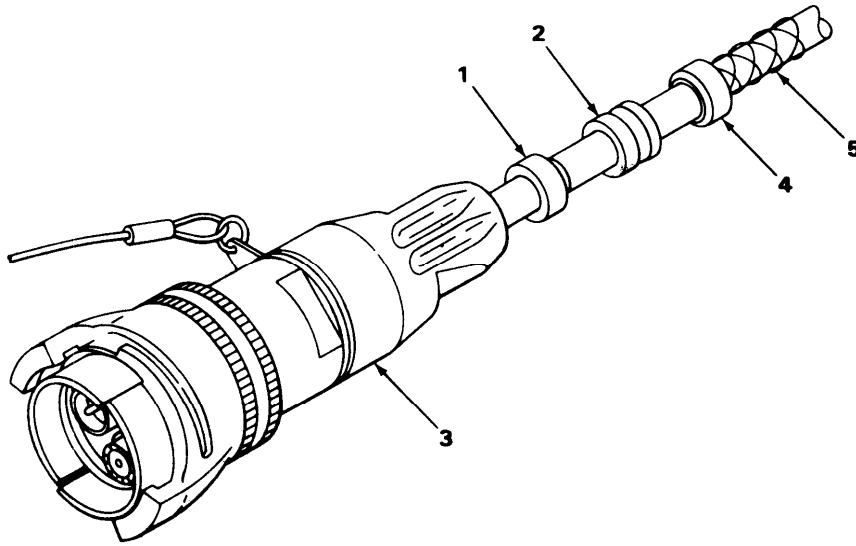
34. Install back-end body (6) onto middle body (7).

NOTE

Back-end body must be within $\frac{3}{16}$ of an inch of middle body's shoulder.

35. Using torque wrench, torque to 58-63 inch-pound on $1 \frac{1}{8}$ -inch flats.

CONNECTOR UG-1870A/U REPLACEMENT (CONT)



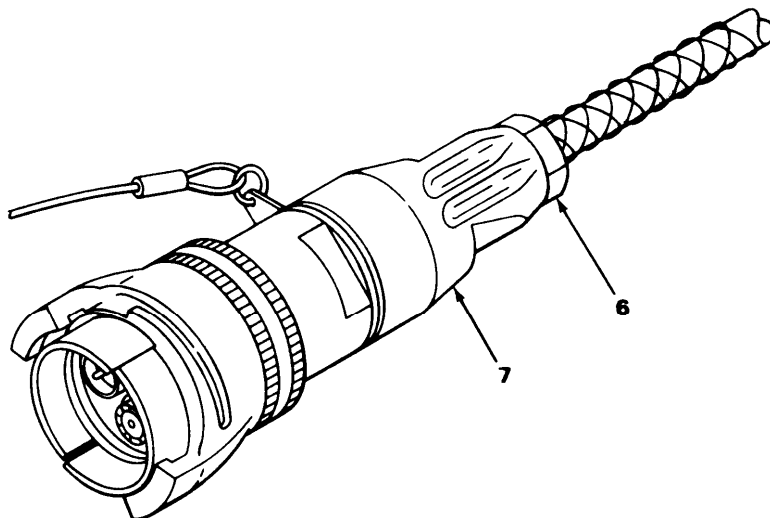
- 36. Install gland retaining washer (1) and cable sealing gland (2) onto back-end body (3).

NOTE

The strain relief axial grip (4) should be preloaded onto cable by compressing wire mesh end (5).

When installing strain relief axial grip (4), make sure it bottoms on cable sealing gland (2).

- 37. Install strain relief axial grip (4).



CONNECTOR UG-1870A/U REPLACEMENT (CONT)**CAUTION**

Be careful not to crosstread the gland retaining nut (6) when installing it into back-end body (7).

38. Install gland retaining nut (6) onto back-end body (7).

CAUTION

Maximum torque of gland retaining nut (6) must not exceed 23 inch-pound. This torque limit is sufficient to cause grip to bite into outer cable jacket.

Shoulder of gland retaining nut (6) must bottom against back-end body (7).

39. Using a torque Wrench, torque gland retaining nut (6) to 24-28 inch-pounds.

Section IV PERFORMANCE STANDARDS

GENERAL

All cables returned to general support for maintenance action, and all repaired cables, should undergo an inspection and insulation breakdown/leakage test.

The inspection entails performing all the PMCS items on pages 2-5 and 2-6. Cables passing this inspection will then undergo an insulation breakdown/leakage test.

INSULATION BREAKDOWN/LEAKAGE TEST

Special environmental conditions should be adhered to when performing this test. Make sure all testing is performed in a room or area approved by your safety officer.

TOOLS AND TEST EQUIPMENT: Electronic Equipment Tool Kit TK-100/G
Insulation Breakdown Test Set AN/GSM-6
Cable test stub

PERSONNEL REQUIRED: Two technicians

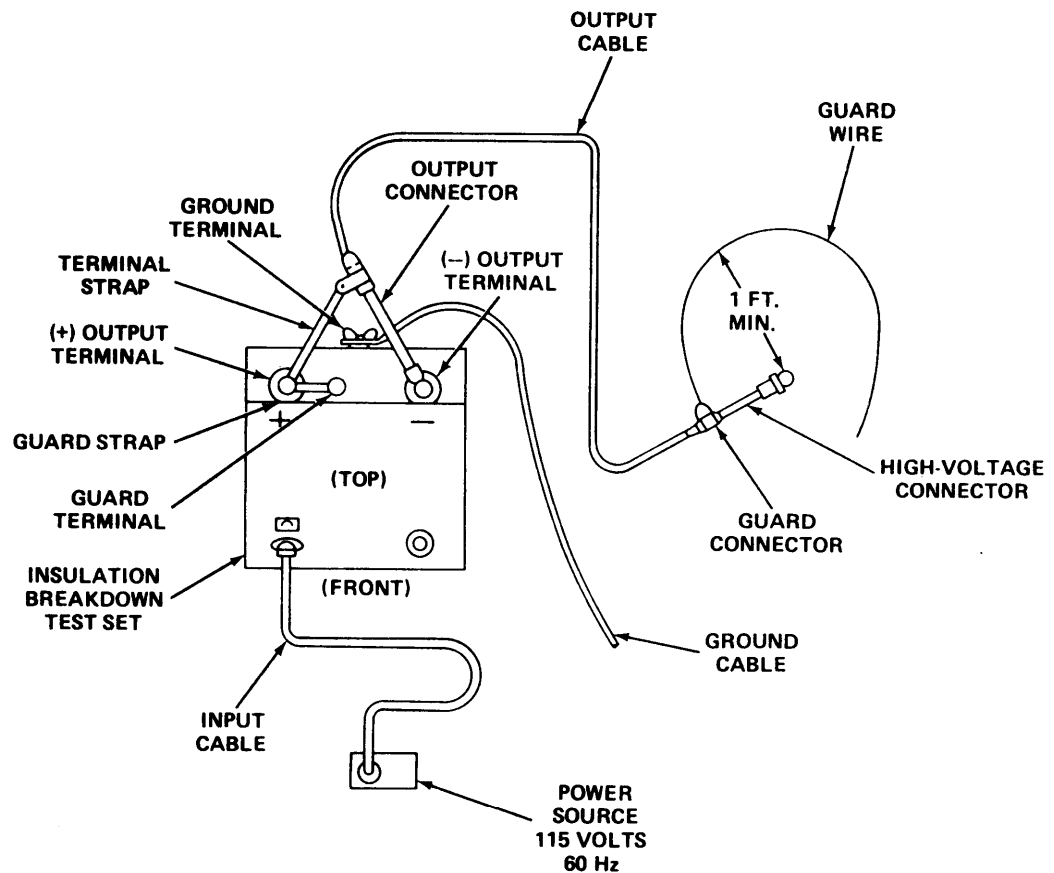
WARNING

Extremely high voltages exist when using the Insulation Breakdown Test Set AN/GSM-6. Voltages as high as 40,000 volts may exist at output cables, output terminals, and cable under test. Don't take chances. Be extremely careful. Serious injury or death may result if you are not careful.

Never perform this test alone.

INSULATION BREAKDOWN/LEAKAGE TEST (CONT)

GENERAL



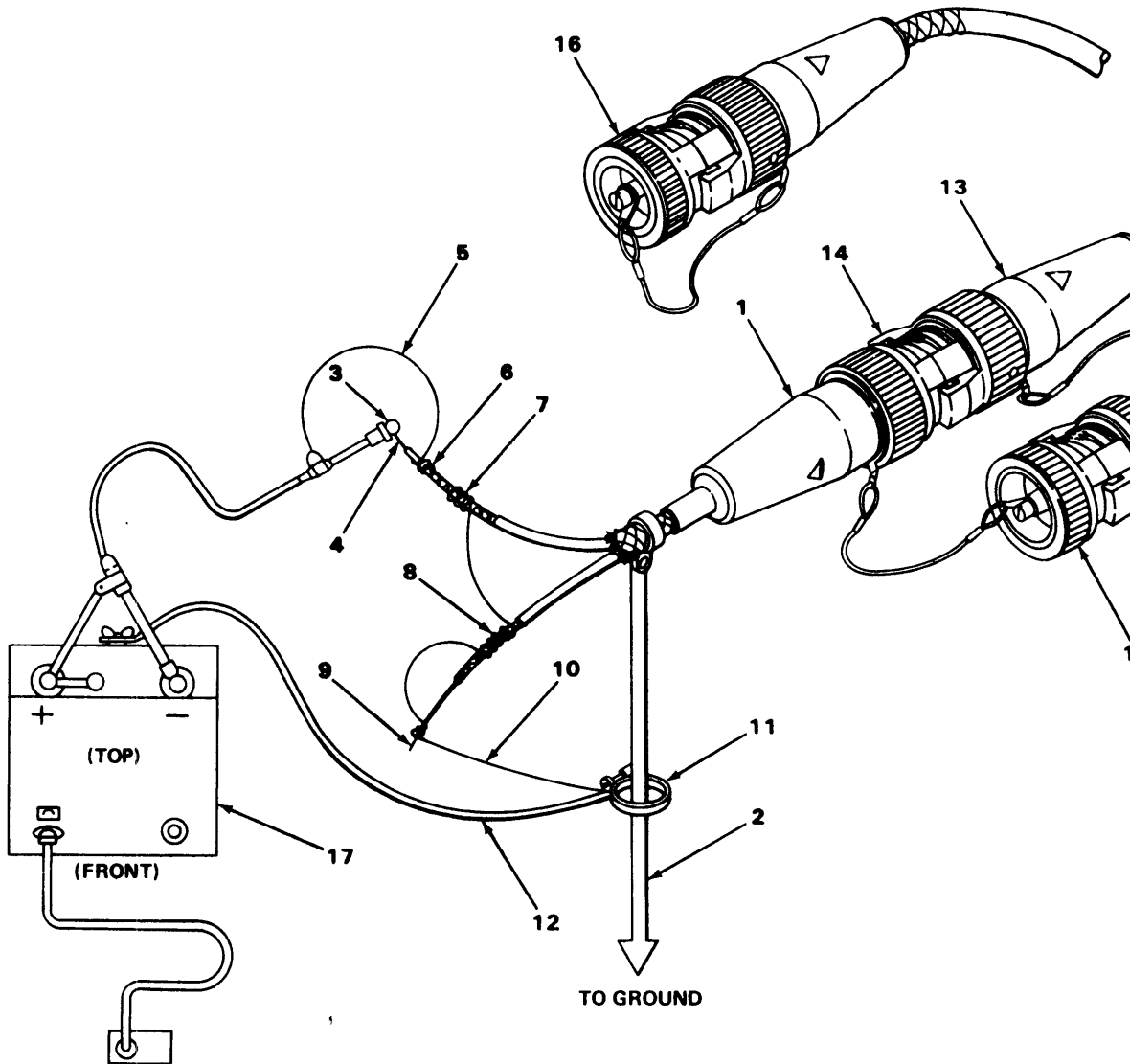
WARNING

Do not turn Insulation Breakdown Test Set AN/GSM-6 on after setting it up. Serious injury could result to personnel due to electrical shock.

1. Set up Insulation Breakdown Test Set AN/GSM-6 as shown above.
2. Do complete Preoperational Procedures on AN/GSM-6 as outlined in TM 11-6825-273-12.
3. Do a complete Stopping Procedure as outlined in TM 11-6625-273-12.

INSULATION BREAKDOWN/LEAKAGE TEST (CONT)

FIRST COAXIAL CABLE PROCEDURE



WARNING

Make sure test cable stub (1) is properly grounded to prevent test leads from touching while testing. Death or serious injury to personnel can result from electrical shock.

NOTE

The ground rod and clamp are part of Breakdown Test Set AN/GSM-6. The test cable stub must be fabricated from a spare adapter cable. (See appendix E for fabrication procedure.)

INSULATION BREAKDOWN/LEAKAGE TEST (CONT)

1. Secure ground rod (2) into ground.
2. Connect test point (3) to tinned center conductor (4) of first coaxial cable.
3. Tightly wrap the guard wire (5) around coaxial dielectric (6).
4. Tightly wrap a length of bare copper wire around first coaxial braid (7), then second coaxial braid (8), and second center conductor (9).

WARNING

Make sure that cable test stub is properly grounded. Death or serious injury could result from electrical shock when equipment is in operation.

5. Extend free end of bare copper wire (10) to ground clamp (11), and secure it properly.

WARNING

Make sure the AN/GSM-6 is properly grounded. Death or serious injury could result from electrical shock when equipment is in operation.

6. Connect AN/GSM-6 ground cable (12) to ground clamp (11).
7. Connect cable to be tested (13) to connector cap (14) of test cable stub (I).
8. Mate caps (15).

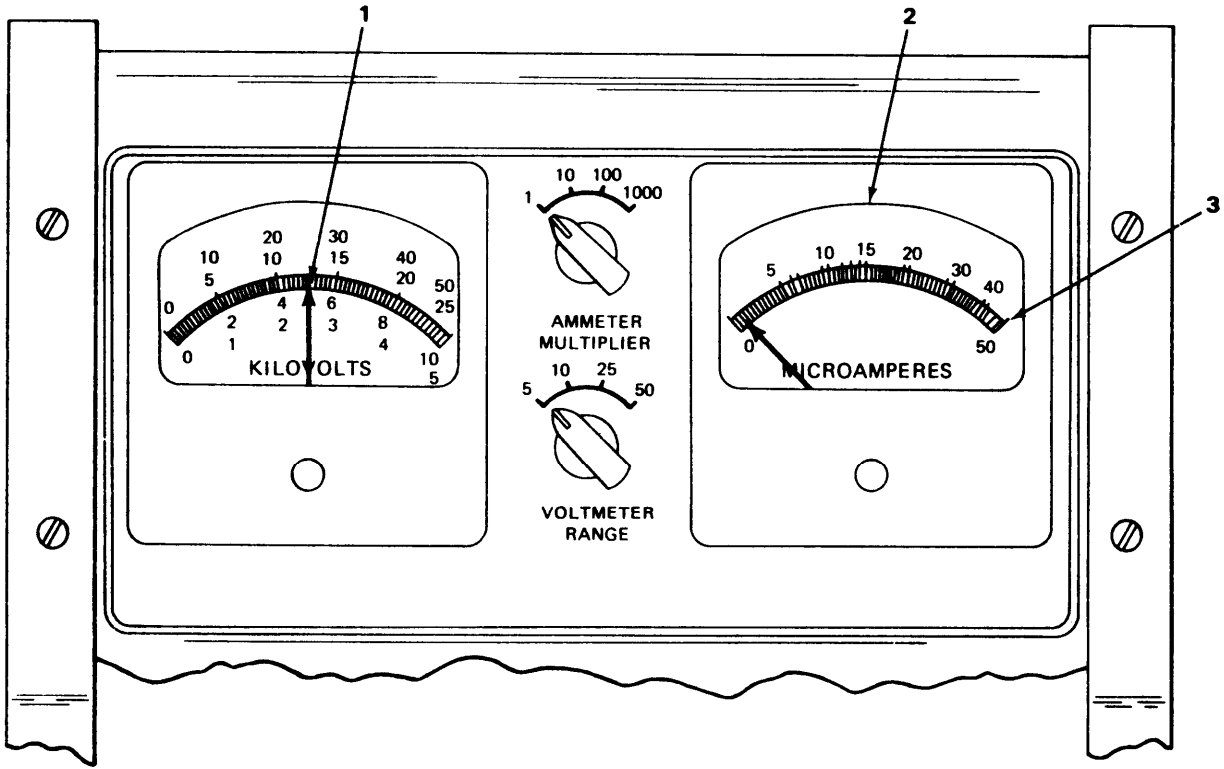
WARNING

Twin coaxial cable assembly under test must be capped at the other end. Death or serious injury to personnel could result from electrical shock.

Twin coaxial adapter cable must not be connected at the other end.

9. Cap twin coax cable assembly (16).
10. Perform Starting Procedures on the AN/GSM-6(17) as outlined in TM 11-6625-273-12.

INSULATION BREAKDOWN/LEAKAGE TEST (CONT)



INSULATION BREAKDOWN/LEAKAGE (CONT)**WARNING**

Twenty-five hundred volts dc exist at the AN/GSM-6 and test cable stub test leads during testing. Don't take chances. Be careful. Death or serious injury may result if you are not careful.

CAUTION

If DC OVERLOAD indicator on the AN/GSM-6 lights up, stop test because you have a bad cable.

Whenever you stop the test, you must always do a complete Stopping Procedure as outlined in TM 11-6625-273-12.

NOTE

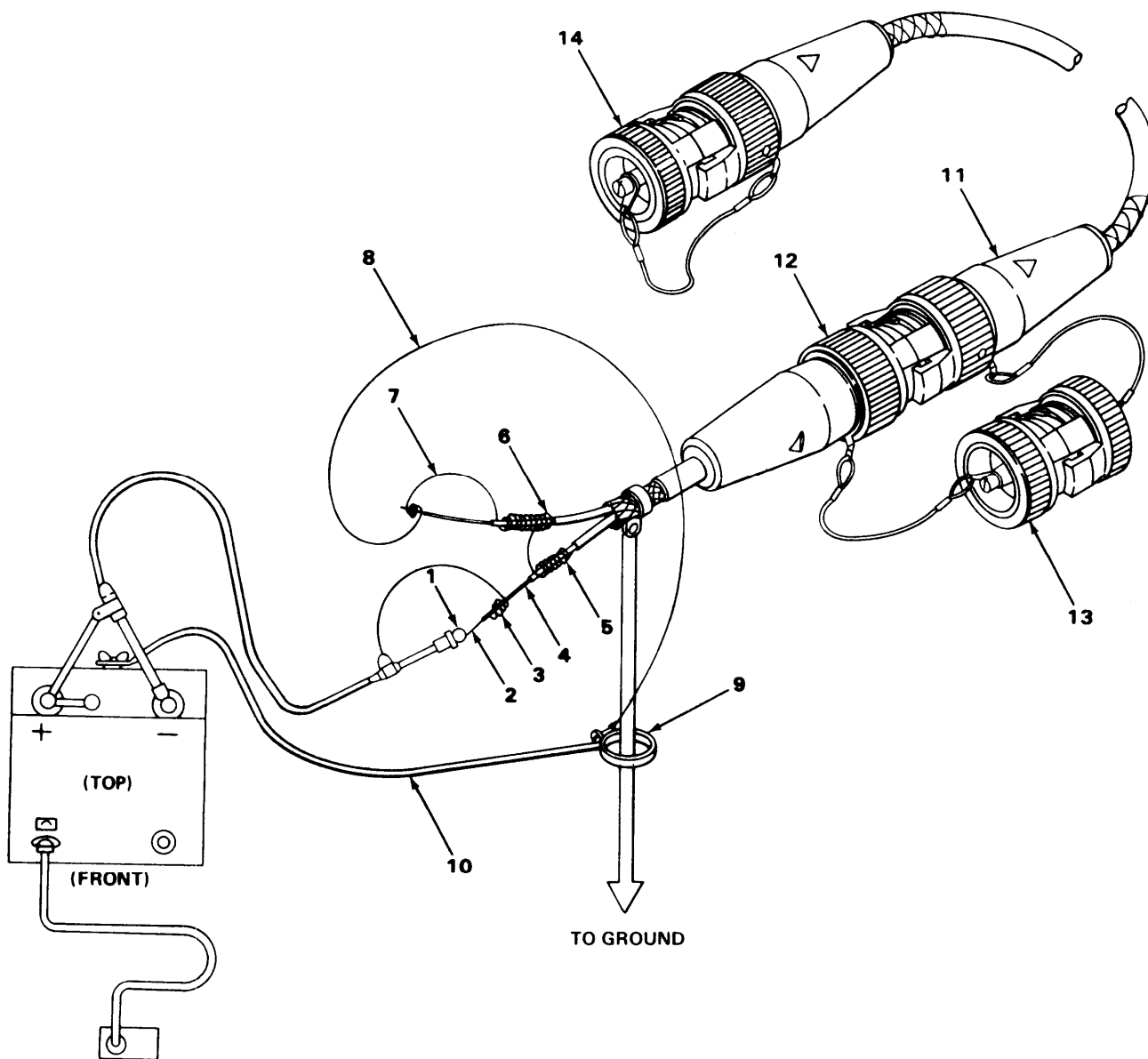
During the 1 minute you are applying 2500 vdc, which should yield a 2.5 kilovolt reading (1), observe the MICROAMPERES (2) meter. If leakage current reaches 50 microampere (3), you have a bad cable. Stop test.

If second coaxial cable passes test voltage for 1 minute, stop applying voltage and do a complete Stopping Procedure.

11. Perform Withstand Test outlined in TM 11-6625-273-12.
12. Apply 2500 vdc for 1 minute.

INSULATION BREAKDOWN/LEAKAGE TEST (CONT)

SECOND COAXIAL CABLE PROCEDURE



1. Connect test point (1) to tinned center conductor (2) of first coaxial cable.
2. Tightly wrap the guard wire (3) around coaxial dielectric (4).
3. Tightly wrap a length of bare copper wire around second coaxial braid (5), then first coaxial braid (6), and first center conductor (7).

INSULATION BREAKDOWN/LEAKAGE TEST (CONT)**WARNING**

Make sure that cable test stub is properly grounded. Death or serious injury could result from electrical shock when equipment is in operation.

4. Extend free end of bare copper wire (8) to ground clamp (9), and secure it properly.

WARNING

Make sure the AN/GSM-6 is properly grounded. Death or serious injury could result from electrical shock when equipment is in operation.

5. Connect AN/GSM-6 ground cable (10) to ground clamp (9).
6. Connect cable to be tested (11) to connector cap (12) of test cable stub.
7. Mate caps (13).

WARNING

Twin coaxial cable assembly under test must be capped at the other end. Death or serious injury to personnel could result from electrical shock.

Twin coaxial adapter cable must not be connected at the other end.

8. Cap twin coaxial cable assembly (14).
9. Perform Starting Procedures on the AN/GSM-6 as outlined in TM 11-6625-273-12.
10. Repeat procedures on page 3-37.

RESISTANCE CHECK

All 1320-foot (1/4-mile) lengths of repaired cable assemblies shall undergo a resistance check. Use resistance bridge ZM-4B/U. Follow instructions given in TM 11-2019. The following data applies:

Dc resistance of center conductor in each coaxial cable shall not exceed 22 ohms.

Dc resistance of shield in each coaxial cable shall not exceed 7.5 ohms.

Any cable having a higher resistance shall be considered defective. Further action on these defective cables shall be determined by your supervisor.

Even if a cable passes all of the performance standards, it may not work well in a system. A final dynamic test is desirable. It may be possible for your supervisor to arrange for a dynamic test using MUX equipment.



APPENDIX A

REFERENCES

A-1. SCOPE.

This appendix lists all pamphlets, technical bulletins, technical manuals and miscellaneous publications referenced in this manual.

A-2. PAMPHLETS.

Consolidated Index of Army Publications and Blank Forms DA PAM 310-1

A-3. TECHNICAL BULLETINS.

Field Instructions for Painting and Preserving Electronics
Command Equipment TB 746-10
Solder and Soldering TB SIG-222

A-4. TECHNICAL MANUALS.

Test Sets 1-49, I-49-A, and I-49-B and Resistance Bridges
ZM-4A/U and ZM-4B/U TM 11-2019

Operator's and Organizational Maintenance Manual; Multi-
plexer TD-202/U (NSN 5805-00-884-2176), TD-203/U
(NSN 5805-00-884-2177), TD-204/U (NSN 5805-00-900-8200),
TD-352/U (5805-00-900-8199), and TD-353/U (NSN 5805-
00-985-9153); Restorers, Pulse Form TD-206/G (NSN 5805-
00-868-8078) and TD-206B/G (NSN 5805-01-020-2251) and
Converters, Telephone Signal CV-1548/G (NSN 5805-00-
069-8795) and CV-1548A/G (NSN 5805-00-069-8795) TM 11-5805-367-12

Direct Support, General Support, and Depot Maintenance
Manual, Restorers, Pulse Form TD-206/G TM 11 -5805-367-35/4

Operator's Manual for Cable Assembly, Special Purpose,
Electrical CX-11230/G (1/4-mile) (NSN 5995-00-133-9126),
CX-11230/G (100-foot) (NSN 5995-00-133-9127),
CX-11230A/G (1320-foot) (NSN 5995-01-121-6623),
CX-112310A/G (100-foot) (NSN 5995-01-125-6781) and
CX-10734/G (NSN 5995-00-133-9125) TM 11-5995-208-10

Operational and Organizational Maintenance: Insulation
Breakdown Test Sets AN/GSM-6 and AN/GSM-6A TM 11-6625-273-12

Operator's, Organizational, Direct Support, General Support, and Depot
Maintenance Manual: Multimeter TS-352B/U (NSN 6625-00-553-0142) TM 11-6625-366-15

Operator and Organizational Maintenance Manual: Test
Set Telephone AN/PTM-7 (NSN 6625-00-902-7574) TM 11-6625-648-12

The Army Maintenance Management System (TAMMS) TM 38-750

Administrative Storage of Equipment TM 740-90-1

Procedures for Destruction of Electronics Materiel to
Prevent Enemy Use TM 750-244-2

A-5. MISCELLANEOUS PUBLICATIONS.

Expendable Items (Except: Medical, Class V, Repair Parts and Heraldic Items)	CTA 50-970
Field Wire and Field Cable Techniques	FM 24-20
Preservation, Packaging, Packing and Marking Materials, Supplies, and Equipment Used by the Army	SB 38-100
Federal Supply Code for Manufacturers; United States and Canada-Code to Name (H4-2) (65A-FSS-H4-2).....	SB 708-42
Tool Kit, Electronic Equipment TK-101/G (NSN 5180-00-064-5178)	SC 5180-91-CL-R13
Tool Kit, Electronic Equipment TK-101/G (NSN 5180-00-064-5178)	SC 5180-91-CL-S21

APPENDIX B

MAINTENANCE ALLOCATION

B-1. GENERAL.

This appendix provides a summary of the maintenance operations for CX-11230A/G. It authorizes categories of maintenance for specific maintenance functions on repairable items and components, and the tools and equipment required to perform each function. This appendix may be used as an aid in planning maintenance operations.

B-2. 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.
- b. Test. To verify serviceability and to detect incipient failure by measuring the mechanical or electrical characteristics of an item and comparing those characteristics with prescribed standards.
- c. Service. Operations required periodically to keep an item in proper operating condition, i.e., to clean (decontaminate); to preserve; to drain; to paint; or replenish fuel, lubricants, hydraulic fluids, or compressed air supplies.
- d. Adjust. To maintain, within prescribed limits, by bringing into proper or exact position, or by setting the operating characteristics to specified parameters.
- e. Align. 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 equipment 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. Install. The act of emplacing, seating, or fixing into position an item, part, module (component or assembly) in a manner to allow the proper functioning of the equipment or system.
- h. Replace. The act of substituting a serviceable like-type part, subassembly, or module (component or assembly) for an unserviceable counterpart.
- i. Repair. The application of maintenance services (inspect, test, service, adjust, align, calibrate, replace) or other maintenance actions (welding, grinding, riveting, straightening, facing, remachining, or resurfacing) to 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.

B-2. MAINTENANCE FUNCTIONS. (CONT)

j. Overhaul. That maintenance effort (service/action) necessary to restore an item to a completely serviceable/operational condition as prescribed by maintenance standards (i.e., DMWR) in appropriate technical publications. 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 material 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-3. COLUMN ENTRIES.

a. Column 1, Group Number. Column 1 lists group numbers, the purpose of which is to identify components, assemblies, subassemblies, and modules with the next higher assembly.

b. Column 2, Component/Assembly. Column 2 contains the noun names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

c. Column 3, Maintenance Functions. Column 3 lists the functions to be performed on the item listed in column 2. When items are listed without maintenance functions, it is solely for purpose of having the group numbers in the MAC and RPSTL coincide.

d. Column 4, Maintenance Category. Column 4 specifies, by the listing of a "worktime" figure in the appropriate subcolumn(s), the lowest level of maintenance authorized to perform the function listed in column 3. This figure represents the active time required to perform that maintenance function at the indicated category of maintenance. If the number or complexity of the tasks within the listed maintenance function vary at different maintenance categories, appropriate worktime figures will be shown for each category. The number of task-hours specified by the worktime figure represents the average time required to restore an item (assembly, subassembly, component, module, end item, or system) to a serviceable condition under typical field operating conditions. This time includes preparation time, troubleshooting time, and quality assurance/quality control time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the maintenance allocation chart. Subcolumns of column 4 are as follows:

- C - Operator/Crew
- O - Organizational
- F - Direct Support
- H - General Support
- D - Depot

e. Column 5, Tools and Equipment. Column 5 specifies by code, those common tool sets (not individual tools) and special tools, test, and support equipment required to perform the designated function.

f. Column 6, Remarks. Column 6 contains an alphabetic code which leads to the remark in section IV, Remarks, which is pertinent to the item opposite the particular code.

B-4. TOOL AND TEST EQUIPMENT REQUIREMENTS (Section III).

a. Tool or Test Equipment Reference Code. The numbers in this column coincide with the numbers used in the tools and equipment column of the MAC. The numbers indicate the applicable tool or test equipment for the maintenance functions.

b. Maintenance Category. The codes in this column indicate the maintenance category allocated the tool or test equipment.

c. Nomenclature. This column lists the noun name and nomenclature of the tools and test equipment required to perform the maintenance functions.

d. National/NATO Stock Number. This column lists the National/NATO stock number of the specific tool or test equipment.

e. Tool Number. This column lists the manufacturer's part number of the tool followed by the Federal Supply Code for manufacturers (5-digit) in parentheses.

B-5. REMARKS (Section IV).

a. Reference Code. This code refers to the appropriate item in section 11, column 6.

b. Remarks. This column provides the required explanatory information necessary to clarify items appearing in section II.

**Section II MAINTENANCE ALLOCATION CHART FOR
CABLE ASSEMBLY, SPECIAL PURPOSE, ELECTRICAL CX-11230A/G**

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY					(5) TOOLS AND EQPT	(6) REMARKS
			C	O	F	H	D		
00	CABLE ASSEMBLY, SPECIAL PURPOSE, ELECTRICAL CX- 11230A/G (1320- FOOT) AND CABLE ASSEMBLY, SPE- CIAL PURPOSE, ELECTRICAL CX-11230A/G (100-FOOT)	Inspect Test Test Install Repair	0.5 0.5	0.2 0.5 0.5		1.0		1 3,4,5 2	A c
01	REEL, CABLE	Inspect Replace		0.1 0.1					
02	CONNECTOR, PLUG ELECTRICAL	Inspect Repair Replace		0.1 0.1		2.5		2 6 thru 21	B D

TM11-5995-208-24&P-1
SECTION III TOOLS AND TEST EQUIPMENT REQUIREMENTS FOR
CABLE ASSEMBLY, SPECIAL PURPOSE, ELETRICAL CS-11230A/G

TOOLS OR TEST EQUIPMENT REF CODE	MAINTENANCE CATEGORY	NOMENCLATURE	NATIONAL/AUTO STOCK NUMBER	TOOL NUMBER
1	C,O	TEST SET, TELEPHONE AN/PTM-7	6625-00-902-7574	
2	O	TOOL KIT, ELECTRONIC EQUIPMENT TK-101/G	5180-00-064-5178	
3	H	TEST SET, INUSULATION BREAKDOWN AN/GSM-6	6625-00-542-1331	
4	H	RESISTANCE BRIDGE ZM-4B/U	6625-00-500-0937	
5	H	MULTIMETER AN/USM-223	6625-00-999-7465	
6	H	TOOL KIT, ELECTRONIC EQUIPMENT TK-100/G	5180-00-605-0079	
7	H	TOOL KIT, ELECTRONIC EQUIPMENT TK-105/G	5180-00-610-8177	
8	H	WRENCH, TORQUE, DE- FLECTING FRAME END DRIVE STYLE, 1/4- INCH SQUARE DRIVE, 60 INCH-POUNDS CAPACITY	5120-00-529-2552	
9	H	WRENCH, TOURQUE, RIGID FRAME END DRIVE SYTLE, 1/4-INCH SQUARE DRIVE, 5-150 INCH-POUNDS CAPACITY	5120-00-542-4489	
10	H	WRENCH, TORQUE, RIGID FRAME END DRIVE STYLE, 3/8-INCH SQUARE DRIVE, 0-150 INCH-POUNDS CAPACITY	5120-00-230-6380	
11	H	WRENCH, TORQUE, DE- FLECTING FRAME END DRIVE STYLE, 12-INCH SQUARE DRIVE, 0-600 INCH-POUNDS CAPACITY	5120-00-221-7947	

TM11-5995-208-24&P-1
SECTION III TOOLS AND TEST EQUIPMENT REQUIREMENTS FOR
CABLE ASSEMBLY, SPECIAL PURPOSE, ELETRICAL CS-11230A/G

TOOLS OR TEST EQUIPMENT REF CODE	MAINTENANCE CATEGORY	NOMENCLATURE	NATIONAL/AUTO STOCK NUMBER	TOOL NUMBER
12	H	HEX CRIMP TOOL, MIL-C-22520/5-05 (81349)		
13	H	HEX CRIMP TOOL, MIL-C-22520/5-53 (81349)		
14	H	STRIPPER, CABLE, MODEL N2878 (04565)	5110-00-134-4585	
15	H	WRENCH, OPEN END CROW-FOOT, 1/4-INCH SQUARE DRIVE, 3/8-INCH, GGG-C-1507A TYPE 1, CLASS 1 (81348)		
16	H	WRENCH, OPEN END CROW-FOOT, 1/4-INCH SQUARE DRIVE, 5/16-INCH, GGG-C-1507A TYPE 1, CLASS 1 (81348)		
17	H	WRENCH, OPEN END CROW-FOOT, 1/2-INCH SQUARE DRIVE, 1 1/8-INCH, GGG-C-1507A TYPE 1, CLASS 3 (81348)		
18	H	WRENCH, OPEN END CROW-FOOT, 3/8-INCH SQUARE DRIVE, 3/4-INCH, GGG-C-1507A TYPE II (81348)		
19	H	WRENCH, OPEN END CROW-FOOT, 3/8-INCH SQUARE DRIVE, 1 1/8-INCH, GGG-C-1507A TYPE II (81348)		
20	H	WRENCH, OPEN END CROW-FOOT, 3/8-INCH SQUARE DRIVE, 1 1/4-INCH, GGG-C-1507A TYPE II (81348)		
21	H	WIRE BRUSH	7510-00-559-9833	

Section IV REMARKS

REFERENCE CODE	REMARKS
A	OPERATIONAL LOOP-BACK TEST.
B	REPLACE CONNECTOR CAP.
C	REPAIR OUTER PLASTIC JACKET.
D	REPAIR TO BE PERFORMED BY HOLDER OF MOS 26L.

APPENDIX C

EXPENDABLE SUPPLIES AND MATERIALS LIST

SECTION 1 INTRODUCTION

C-1. SCOPE

This appendix lists expendable supplies and materials you will need to operate and maintain CX-1123A/G. These items are authorized to you by CTA 50-970, Expendable Items (except medical, class V, repair parts, and heraldic items).

C-2 EXPLANATION OF COLUMNS.

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, appendix D").

b. Column (2), Level. This column identifies the lowest level of maintenance that requires the listed item.

- C - Operator/Crew
- O - Organizational Maintenance
- F - Direct Support Maintenance
- H - General Support 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. The 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.

SECTION II EXPENDABLE SUPPLIES AND MATERIALS LIST

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION (FSCM)	(5) U/M
1	O,H	8040-01-046-8902	LOCTITE ADHESIVE 26231 (05872)	OZ
2	O,H	8305-00-267-3015	CLOTH, CHEESE, COTTON, LINTLESS, BLEACHED, 36-INCH, CCC-C-440, TYPE 11, CLASS 2 (81348)	FT
3	H	7510-00-266-6712	TAPE, PRESSURE SENSITIVE, ADHESIVE MASKING, 1-INCH	ROLL
4	O		TAPE, FLOURGLASS, 1-INCH 381-10(57226)	ROLL
5	H		DC-4 SILICONE GREASE	
6	H		60/40 SOLDER	

APPENDIX D
ORGANIZATIONAL, DIRECT SUPPORT, AND GENERAL SUPPORT REPAIR
PARTS AND SPECIAL TOOLS LIST

SECTION 1 INTRODUCTION

D-1 . Scope

This manual lists spares and repair parts; special tools; special test, measurement, and diagnostic equipment (TMDE), and other special support equipment required for performance of organizational, direct support and general support maintenance of the CX-11230A/G (1320 FOOT) and the CX-11230A/G (100 FOOT). It authorizes requisitioning and issue of spares and repair parts as indicated by the source and maintenance codes.

D-2. General

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 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 numeric sequence, with the parts in each group listed in figure and item number sequence.

b. Section III. Special Tools List. Not applicable.

c. Section IV. National Stock Number and Part Number Index. A list, in National item identification number (NIIN) sequence, of all National stock numbers (NSN) appearing in the listings, followed by a list, in alphameric 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.

D-3. Explanation of Columns

a. Illustration. This column is divided as follows:

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

(2) *Item number* The number used to identify item called out in the illustration.

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

(1) *Source code.* Source codes indicate the manner of acquiring support items for maintenance, repair, or overhaul of end items. Source codes are entered in the first and second positions of the Uniform SMR Code format as follows:

<i>Code</i>	<i>Definition</i>
PA —	Item procured and stocked for anticipated or known usage.
XA —	Item is not procured or stocked because the requirements for the item will result in the replacement of the next higher assembly.

NOTE

Cannibalization or salvage may be used as a source of supply for any items source coded above except those coded XA and aircraft support items as restricted by AR 750-1.

(2) *Maintenance code.* Maintenance codes are assigned to indicate the levels of maintenance authorized to USE and REPAIR support items. The maintenance codes are entered in the third and fourth positions of the Uniform SMR Code format as follows:

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

<i>Code</i>	<i>Application/Explanation</i>
O -	Support item is removed, replaced, used at the organizational level.
H -	Support item is removed, replaced, used at the general support level.

(b) The maintenance code entered in the fourth position indicates whether the item is to be repaired and identifies the lowest maintenance level with the capability to perform complete repair (i.e., all authorized maintenance functions). This position will contain one of the following maintenance codes:

<i>Code</i>	<i>Application/Explanation</i>
O	— The lowest maintenance level capable of complete repair of the support item is the organizational level.
H	— The lowest maintenance level capable of complete repair of the support item is the general support level.
Z	-- Nonreparable. No repair is authorized.

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

<i>Recoverability Code</i>	<i>Definition</i>
Z	— Nonreparable item. When unserviceable, condemn and dispose at the level indicated in position 3.
O	— Repairable item. When uneconomically repairable, condemn and dispose at the organizational level.
H	— Repairable item. When uneconomically repairable, condemn and dispose at the general support level.

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

d. Federal Supp/y Code for Manufacturer (FSCM). The FSCM is a 5-digit numeric code listed in SB 708-41/42 which is used to identify the manufacturer, distributor, or Government agency, etc.

e. Part Number. 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 a stock numbered item is requisitioned, the repair part received may have a different part number than the part being replaced.

f. Description. Indicates the Federal item name and, if required, a minimum description to identify the item.

g. Unit of Measure (U/M). Indicates the standard of the basic quantity of the listed item as used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea, in, pr, etc). When the unit of measure differs from the unit of issue, the lowest unit of issue that will satisfy the required units of measure will be requisitioned.

h. (Quantity Incorporated in Unit. 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 no specific quantity is applicable, (e.g., shims, spacers, etc).

D-4. Special Information

Usable on codes are shown in the description column. Uncoded items are applicable to all models. Identification of the usable on codes used in this publication are:

<i>Code</i>	<i>Used On</i>
FH6	CX-11230A/G (100 FOOT)
FH7	CX-11230A/G (1 320 FOOT)

D-5. How to Locate Repair Parts

a. When National stock number or part number is unknown.

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

(2) *Second.* Find the illustration covering the functional group to which the item belongs.

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

(4) *Fourth.* Using the Repair Parts Listing, find the figure and item number noted on the illustration.

b. When National stock number or part number is known.

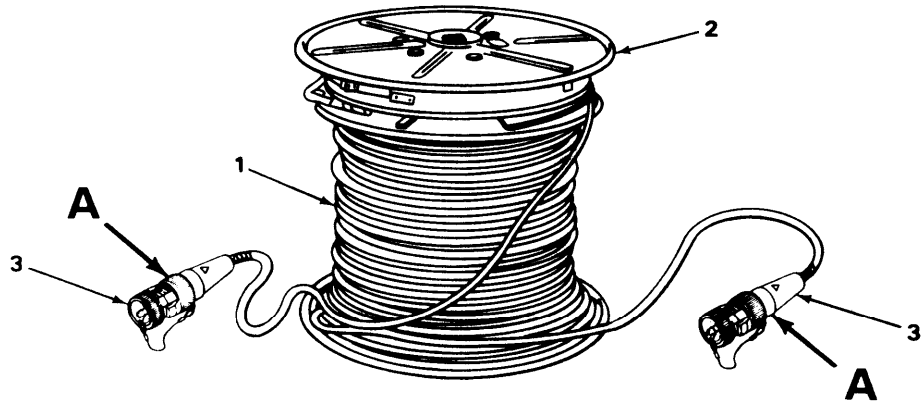
(1) *First.* Using the Index of National Stock

Numbers and Part Numbers, find the pertinent National stock number or part number. This index is in NIIN sequence followed by a list of part numbers in alphameric sequence, cross-referenced to the illustration figure number and item number.

(2) *Second.* After finding the figure and item number, locate the figure and item number in the repair parts list.

6. Abbreviations

Not applicable.



OR

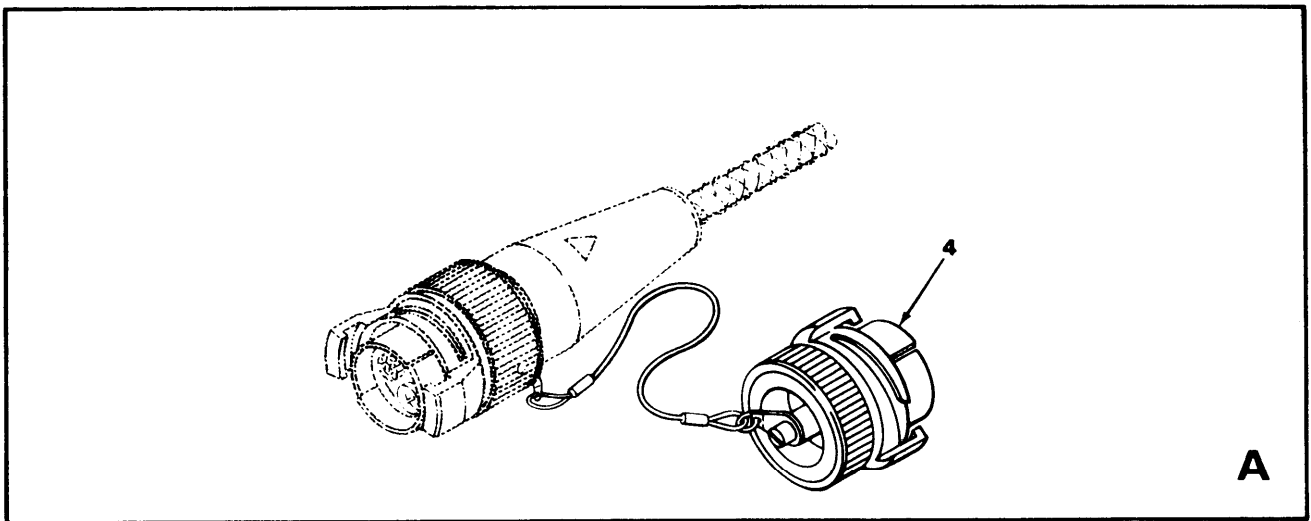
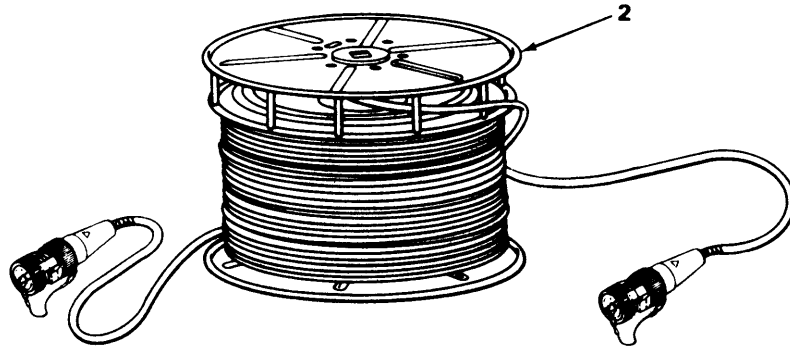


FIGURE D-1. CABLE ASSEMBLY, SPECIAL PURPOSE, ELECTRICAL CX-11230A/G (1320 FEET).

REPAIR PARTS LIST

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ILLUS- TRATION (a) FIG. NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	FSCM	PART NUMBER	DESCRIPTION	U\M INC IN UNIT

GROUP OO CABLE ASSEMBLY, SPECIAL PURPOSE
ELECTRICAL CX-11230A/G (1320 FEET) AND
CABLE ASSEMBLY, SPECIAL PURPOSE,
ELECTRICAL CX-11230A/G
(100 FEET)

D-1	1	XAOOO		80063	WD-37A-U	CABLE	FH7 FT 1320
D-1	2	PAOZZ	8130-00-964-9014	80063	RC-453/G	REEL,CABLE ALTERNATE FOR RC-453B/G	FH7 EA 1
D-1	2	PAOZZ	8130-01-147-4858	80058	RC-453B/G	REEL,CABLE ALTERNATE FOR RC-453/G	FH7 EA 1
D-1	3	PAHHH	5935-01-146-3413	80058	UG-1870A/U	CONNECTOR, PLUG ELECTRICAL	FH7 EA 2
D-1	4	PAOZZ	5999-01-146-3414	80063	A3000760-2	CAP, ELECTRICAL	FH7 EA 1

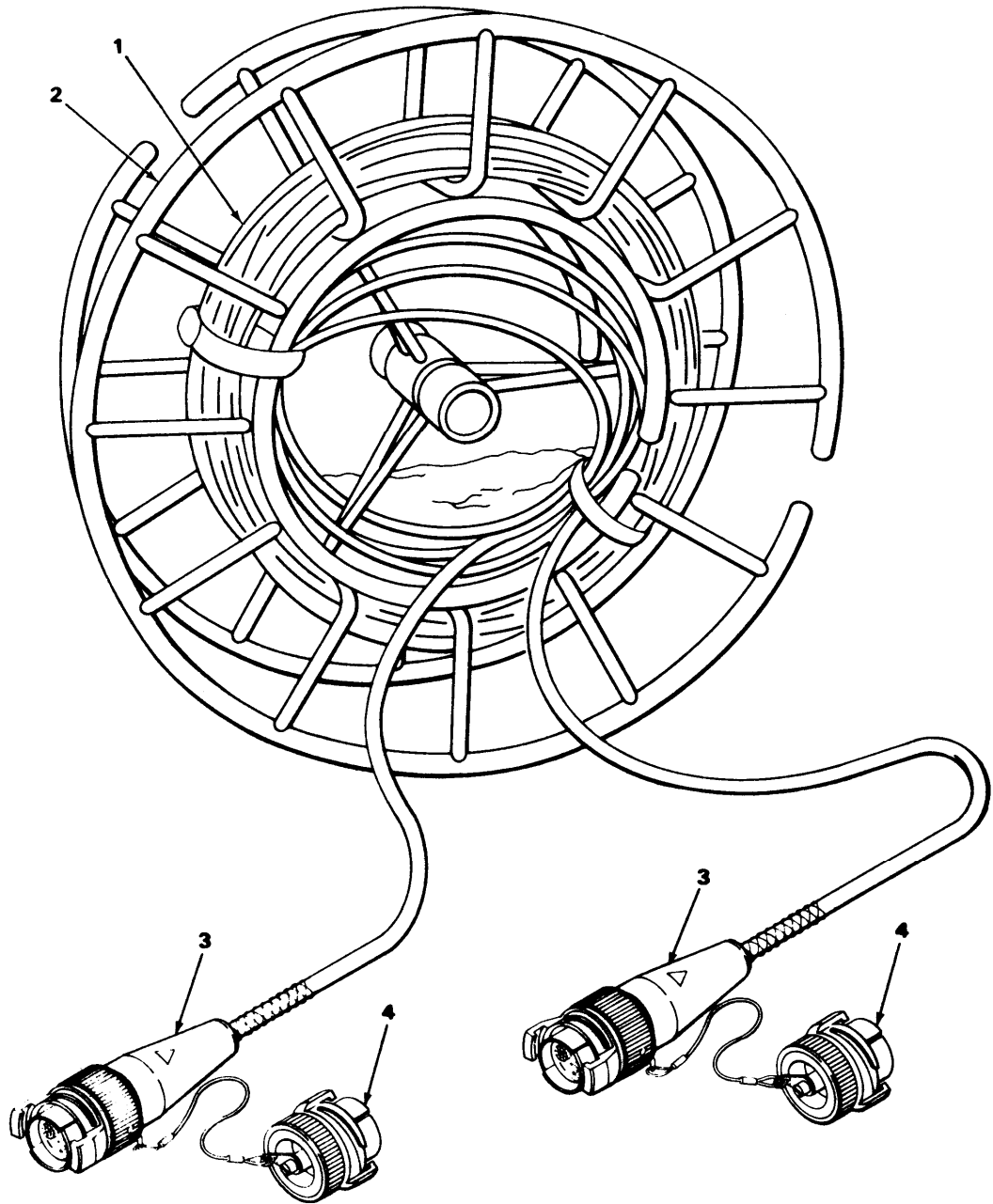


FIGURE D-2. CABLE ASSEMBLY, SPECIAL PURPOSE, ELECTRICAL CX-11230A/G (100 FEET).

(1) ILLUS- TRATION (a) FIG. NO.	(2) SMR CODE (b) ITEM NO.	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION	(7) U\M	(8) QTY INC IN UNIT
						USABLE ON CODE FH6	
D-2	1	XAOOO		80063	WD-37A/U	CABLE	FH6 FT 100
D-2	2	PAOZZ	8130-00-656-1090	80063	RC-435/U	REEL, CABLE	FH6 EA 1
D-2	3	PAHHH	5935-01-146-3413	80058	UG-1870A/U	CONNECTOR, PLUG ELECTRICAL	FH6 EA 2
D-2	4	PAOZZ	5999-01-146-3414	80063	A3000760-2	CAP, ELECTRICAL	FH6 EA 1

NATIONAL STOCK NUMBER AND PART NUMBER INDEX

NATIONAL STOCK NUMBER	FIGURE NO.	ITEM NO.
8130-00-656-1090	D-2	2
8130-00-964-9014	D-1	2
5935-01-146-3413	D-1	3
5935-01-146-3413	D-2	3
5999-01-146-3414	D-1	4
5999-01-146-3414	D-2	4
8130-01-147-4858	D-1	2

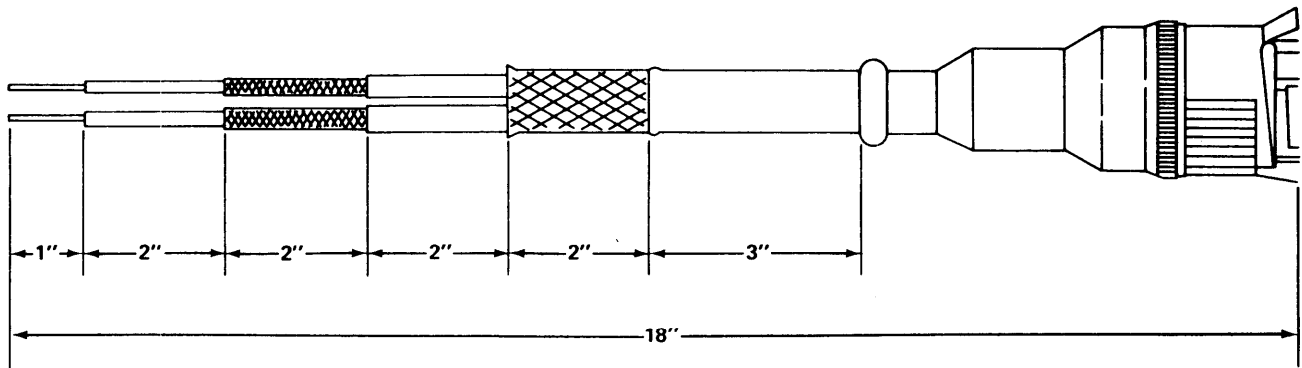
FSCM	PART NUMBER	NATIONAL STOCK NUMBER	FIGURE NO.	ITEM NO.
80063	A3000762-2	5999-01-146-3414	D-1	4
80063	A3000760-2	5999-01-146-3414	D-2	4
80063	RC-435/U	8130-00-656-1090	D-2	2
80058	RC-435B/G	8130-01-147-4858	D-1	2
80063	RC-453/G	8130-00-964-9014	D-1	2
80058	UG/1870A/U	5935-01-146-3413	D-1	3
80058	UG-1870A/U	5935-01-146-3413	D-2	3
80063	WD-37A/U		D-1	1
80063	WD-37A/U		D-2	1

APPENDIX E

ILLUSTRATED LIST OF MANUFACTURED ITEMS

OVERVIEW

This appendix includes complete instructions for making items authorized to be manufactured or fabricated at general support maintenance.



NOTES:

1. FABRICATE FROM NSN 5995-00-133-9125 STOCK.
2. DISCARD TWO SMALLER CONNECTORS.
3. TRIM FILLER ALONG WITH OUTER SUPPORT BRAID.
4. REPEAT TRIMMING ON REMAINING COAX CABLE.

EL91S076

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 23 Jan 74

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PAGE NO	PARA-GRAPH	FIGURE NO	TABLE NO
2-25	2-28		
3-10	3-3		3-1
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		F03	

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

Recommend that the installation antenna alignment procedure be changed throughout to specify a 2° IFF antenna lag rather than 1°.

REASON: Experience has shown that with only a 1° lag, the antenna servo system is too sensitive to wind gusting in excess of 25 knots, and has a tendency to rapidly accelerate and decelerate as it hunts, causing strain to the drive train. Hunting is minimized by adjusting the lag to 2° without degradation of operation.

Item 5, Function column. Change "2 db" to "3db."

REASON: The adjustment procedure for the TRANS POWER FAULT indicator calls for a 3 db (500 watts) adjustment to light the TRANS POWER FAULT indicator.

Add new step f.1 to read, "Replace cover plate removed in step e.1, above."

REASON: To replace the cover plate.

Zone C 3. On J1-2, change "+24 VDC to "+5 VDC."

REASON: This is the output line of the 5 VDC power supply. +24 VDC is the input voltage.

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