TM 11-5985-384-12&P

TECHNICAL MANUAL

OPERATOR'S AND UNIT MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST

MAST, ANTENNA, 15 METER AB-1339/G

(NSN 5985-01-248-4760)

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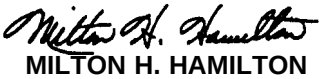

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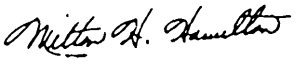

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SAFETY STEPS TO FOLLOW IF SOMEONE IS THE VICTIM OF ELECTRICAL SHOCK

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 DRY WOODEN POLE OR A DRY 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. REFER TO FM 21-11

WARNING

USE OF CLEANING SOLVENT

Fumes of TRICHLOROTRIFLUOROETHANE are poisonous. Provide adequate ventilation whenever you use TRICHLOROTRIFLUOROETHANE. Do not use solvent near heat or open flame. TRICHLOROTRIFLUOROETHANE will not burn, but heat changes the gas into poisonous, irritating fumes. Do not breathe the fumes or vapors. TRICHLOROTRIFLUOROETHANE dissolves natural skin oils. Do not get the solvent on your skin. Use gloves, sleeves and an apron that the solvent cannot penetrate. If the solvent is taken internally, see a doctor immediately.

WARNING

To avoid injury or death, observe the following during installation procedures:

- Do not erect mast if wind velocity is 33 miles per hour (15 meters per second) or greater.
- Never install telescopic masts (including supporting winder stay assemblies) directly under any type of power line.
- Do not attempt to install telescopic mast during an electrical storm or when a storm is imminent.
- Two people are required to lift or carry telescopic mast.
- Wear safety goggles, work gloves, and helmet, as appropriate.

WARNING

Telescopic mast and a full bag of mast accessories are heavy. To avoid injury, two people are required to lift or carry these items.

WARNING

After completing mast installation, mark all stays with streamers or approved markers in accordance with TB SIG 291. Failure to mark guys could result in serious injury to personnel.

WARNING

Do not retract mast if wind velocity is 33 miles per hour (15 meters per second or greater). Mast could topple and cause serious injury or death to personnel.

WARNING

To avoid injury or death, observe the following during disassembly procedures:

- Do not attempt to disassemble telescopic mast during an electrical storm.
- Two people are required to lower or carry telescopic mast.
- Wear safety goggles, work gloves, and helmet, as appropriate, during disassembly of telescopic mast.

WARNING

Stay anchors should always be inspected periodically and driven further down if necessary. This inspection must be performed more frequently during strong winds or a rainstorm, which can soften the ground. Under these conditions, strain on stay anchors can be reduced by moving them outward as required (one at a time and preferably in advance of adverse conditions noted), up to distances permitted by full lengths of winder stay assemblies.

WARNING

During bad weather, high wind, or icy conditions, inspect stay anchors, winder stay assemblies, and telescopic mast frequently.

WARNING

Control winch with a firm grip on the handle at all times. When raising mast, listen for clicking sound from winch safety catch on ratchet. If sound is not heard, stop raising procedure and lower mast to its retracted position. Adjust brake as necessary to ensure safe, controlled lowering of mast. Inspect winch for damaged or missing safety catch spring. Safety catch spring connects the safety catch lever to the winch housing near the brake control knob.

WARNING

To avoid injury to personnel and damage to equipment, do not use substitute for winch shear pin. Use authorized part only.

TECHNICAL MANUAL

No. 11-5895-384-12&P

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC, 1 March 1989

OPERATOR'S AND UNIT MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST

MAST, ANTENNA, 15 METER

(NSN 5985-01-248-4760) (EIC: N/A)

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, US Army Communication-Electronics Command and Fort Monmouth, ATTN: AMSEL-LC-LM-LT, Fort Monmouth, New Jersey 07703-5007.

A reply will be furnished directly to you.

*This manual supersedes TM 11-5985-384-12&P, 1 March 1989.

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CHAPTER 1

INTRODUCTION

Section I. GENERAL INFORMATION

1-1 SCOPE.

This manual describes the Mast, Antenna, 15 Meter AB-1339/G, hereafter referred to as the 15-meter mast, and contains instructions for the installation, operation, and unit-level maintenance of the equipment. It also contains the Repair Parts and Special Tools List (RPSTL), Appendix F.

1-2 CONSOLIDATED INDEX OF ARMY PUBLICATIONS AND BLANK FORMS.

Refer to the latest issue of DA Pam 25-30 to determine whether there are new editions, changes, or additional publications pertaining to the equipment.

1-3 MAINTENANCE FORMS, RECORDS, AND REPORTS.

1-3.1 Reports of Maintenance and Unsatisfactory Equipment. Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA Pam 738-750 as contained in Maintenance Management Update.

1-3.2 Reporting of Item and Packaging Discrepancies. Fill out and forward SF 364 (Report of Discrepancy (ROD)) as prescribed in AR 735-11-2/DLAR 4140.55/SECNAVlNST 4355.18/AFR 400-54/MCO 4430.3J.

1-3.3 Transportation Discrepancy Report (TDR) (SF 361). Fill out and forward Transportation Discrepancy Report (TDR) (SF 361) as prescribed in AR 55-38/NAVSUPINST 4610.33C/AFR 75-18/MCO P4610.19D/DLAR 4500.15.

1-4 REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR).

If your 15-meter mast 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 or performance. Put it on an SF 368 (Product Quality Deficiency Report). Mail it to: Commander, U.S. Army Communications-Electronics Command and Fort Monmouth, ATTN: AMSEL-LC-ED-TC, Fort Monmouth, New Jersey 07703-5023. We'll send ■ you a reply.

1-5 ADMINISTRATIVE STORAGE.

Administrative storage of equipment issued to and used by Army activities will have preventive maintenance performed in accordance with the Preventive Maintenance Checks and Services (PMCS) tables before storing. When removing the equipment from administrative storage, the PMCS must be performed to assure operational readiness, Disassembly and repacking of equipment for shipment or limited storage are covered in Chapter 2.

1-6 DESTRUCTION OF ARMY ELECTRONICS MATERIEL.

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

1-7 WARRANTY INFORMATION.

Refer to TB 11-5800-216-15 for information concerning equipment warranties. ■

1-8 NOMENCLATURE CROSS-REFERENCE LIST.

Table 1-1 is a cross-reference list of common names and official nomenclature for equipment described in this manual. Official nomenclature must be used when completing report forms.

Table 1-1. Nomenclature Cross-Reference List

COMMON NAME	OFFICIAL NOMENCLATURE
15-meter mast	Mast, Antenna, 15 Meter AB-1339/G

Section II EQUIPMENT DESCRIPTION AND DATA

1-9 PURPOSE AND USE.

The 15-meter mast (fig. 1-1) is a portable, telescoping mast for mounting VHF and UHF radio antennas.

Instructions for mounting a particular antenna are found in the technical manual of the shelter using that radio/antenna configuration.

1-10 EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES.

1-10.1 Equipment Characteristics. The 15-meter mast system (fig. 1-2) consists of a telescopic mast and a bag of mast accessories. Figure 1-3 shows the telescopic mast partially extended. The mast accessories are described in Chapter 2. The following paragraphs describe the overall characteristics of these components.

1-10.1.1 Telescopic Mast The telescopic mast has six sections of telescoping, aluminum alloy tubes (fig. 1-3). The bottom three sections have a hexagonal cross-section; the top three, a circular cross-section. These six sections move inside one another on plastic guideways. The spaces between the mast assembly sections house the wire hoisting ropes (figs. 1-3 and 1-4), which are used to elevate the individual sections during mast erection.

Hoisting is accomplished with a winch (figs. 1-3, 1-4, and 1-5), which has a spur gear system, an adjustable friction brake that prevents kickback, a safety catch, and a crank handle. The winch is easily attached to and detached from the mast. The winch mounting slots fit over two cap bolts on section 1 of the mast and the winch is secured to the mast by means of the quick-lock latch. Fittings of stainless steel are either screwed or riveted to the tubes. The mast is coated with infrared-resistant, dark green paint.

Mast sections 2 through 6 are elevated by means of five separate hoisting ropes (figs. 1-3 and 1-4). In the following description of the mast hoisting system, the mast is initially in its fully retracted position.

a. The winch rope, used for hoisting section 2 of the mast, is secured to the winch's cable drum (fig. 1-5). From there, the rope runs up to an exterior pulley near the top of section 1 (fig. 1-6). The winch rope passes over this pulley and inside section 1, where it runs down between section 2 and section 1. The cable continues on to a pair of pulleys (fig. 1-6) at the bottom of section 2. The winch rope passes underneath the pulleys and then runs up between section 2 and section 1. The rope exits through a hole near the top of section 1 and is clamped there. This is how the winch rope supports section 2. Hand-cranking the winch rope raises section 2 out of section 1 (fig. 1-4).

b. The two ends of the hoisting rope for section 3 are secured near the top of section 1 (fig. 1-4). From there, the rope runs up to a pair of pulleys at the top of section 2 (fig. 1-6). It passes over these pulleys and inside section 2, where it runs down between section 3 and section 2. Finally, it

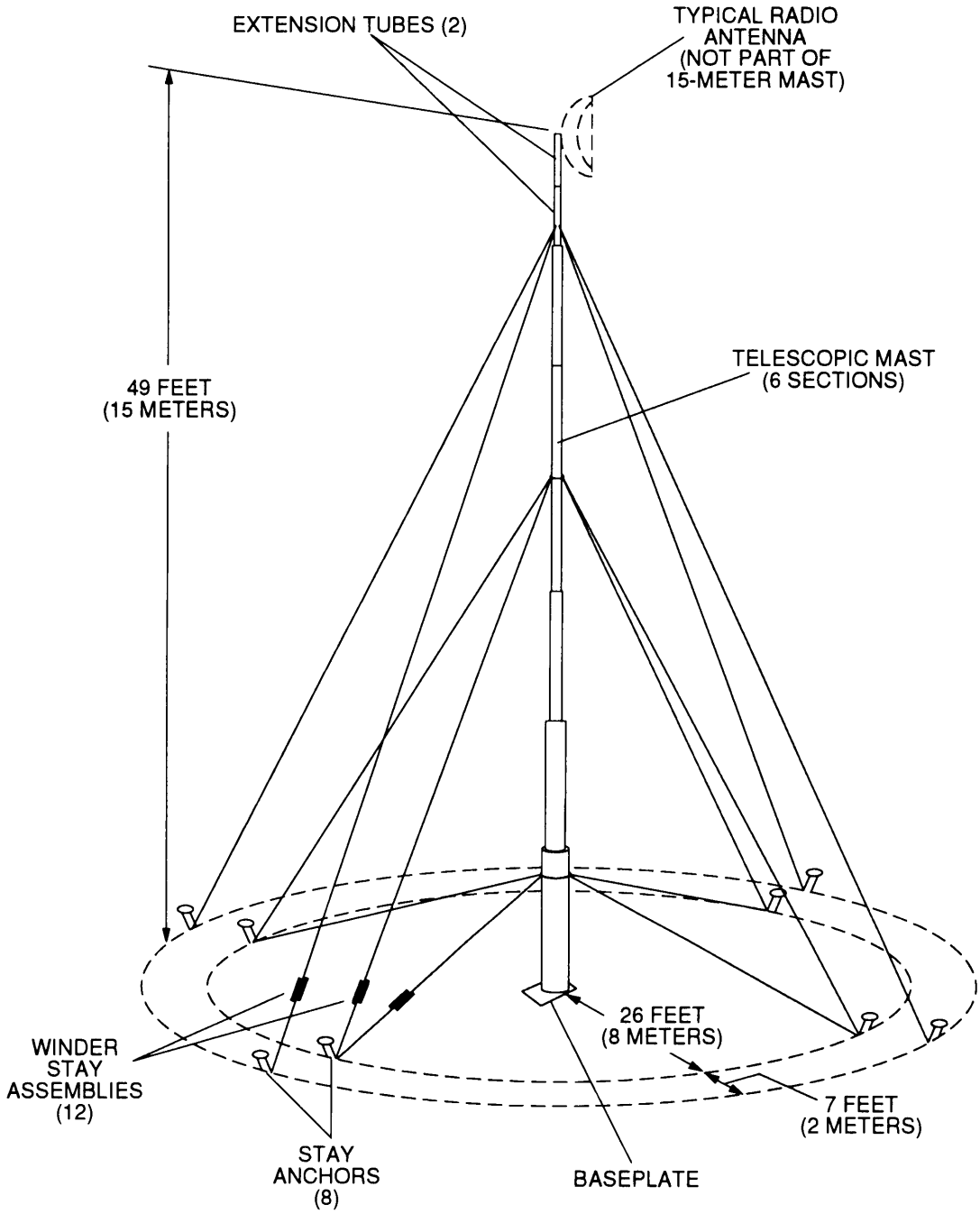


Figure 1-1. Typical 15-Meter Mast Installation

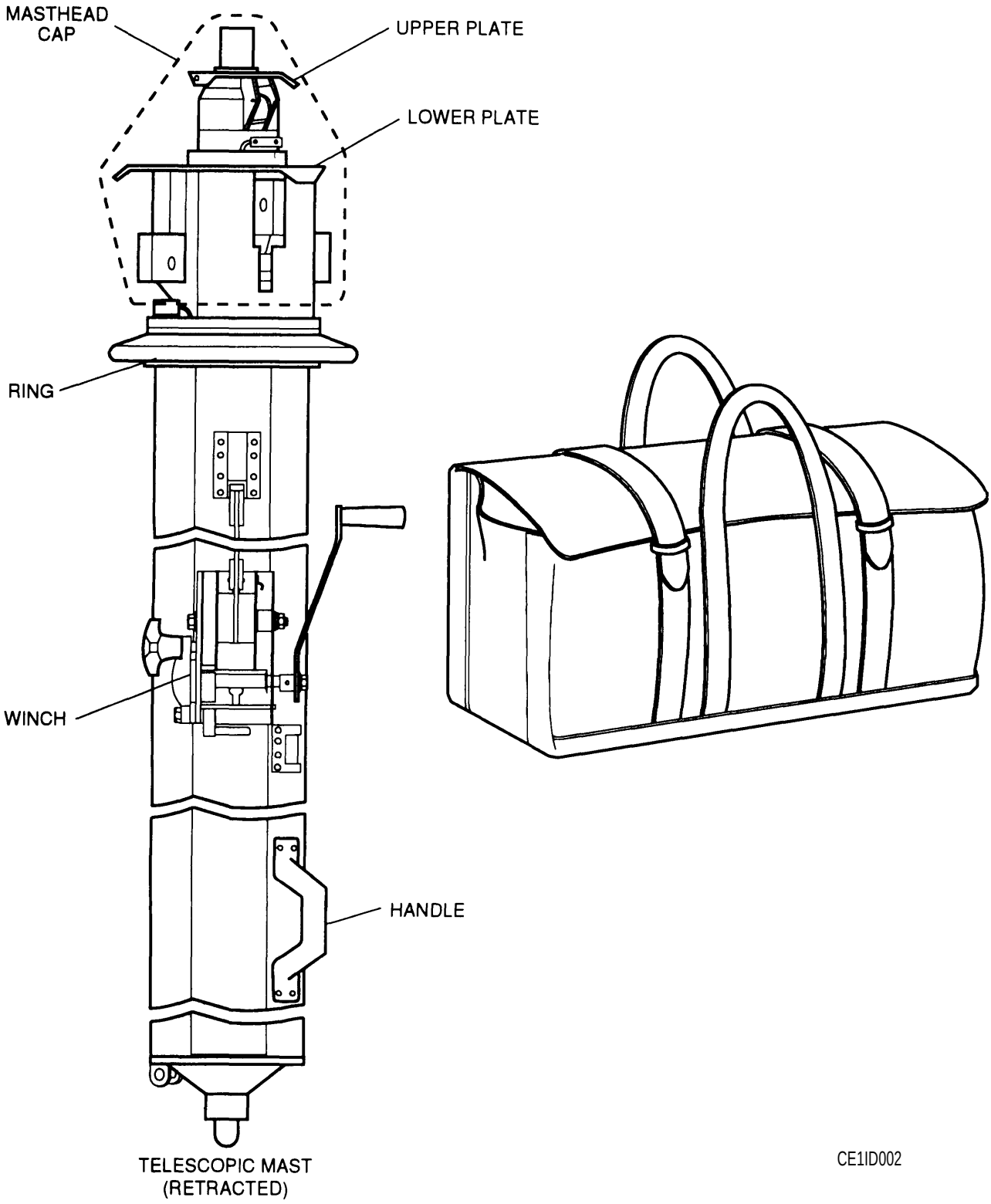


Figure 1-2. 15-Meter Mast Equipment

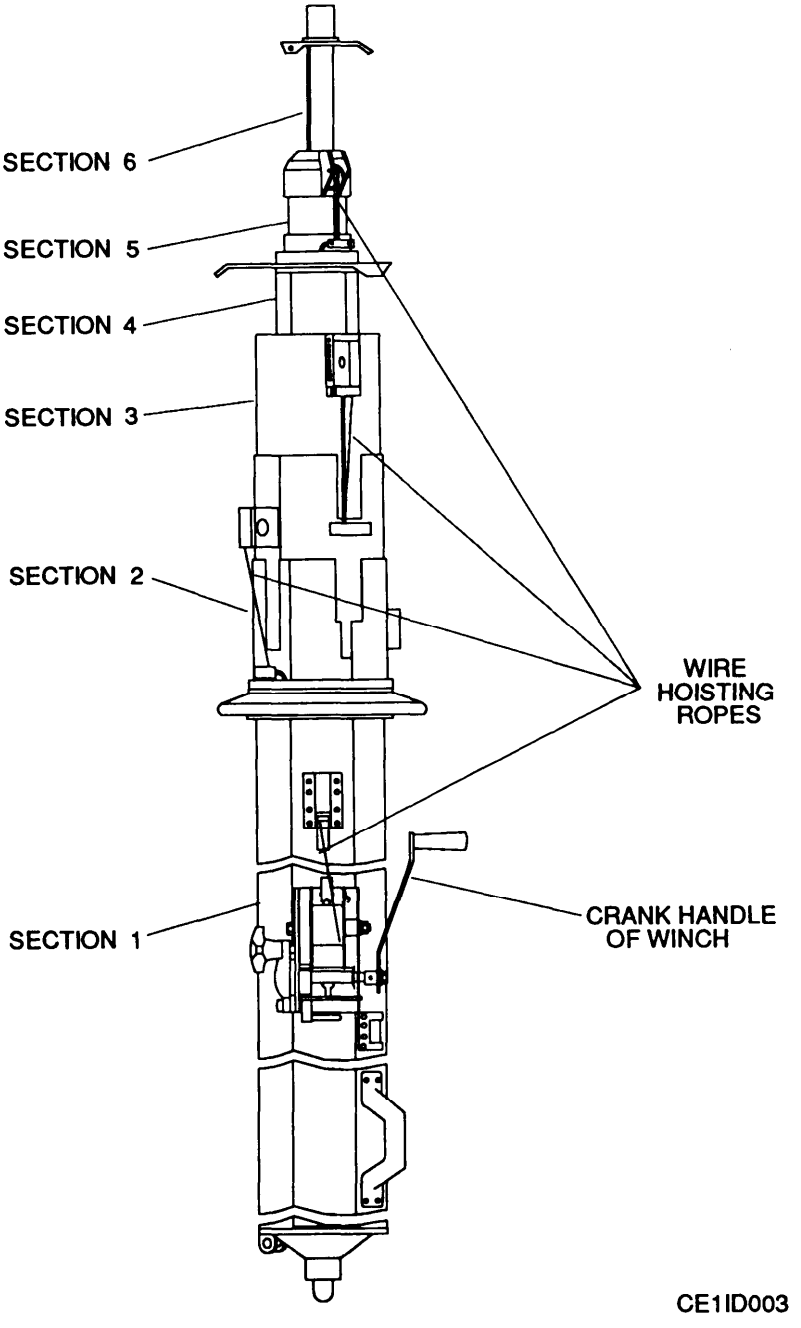
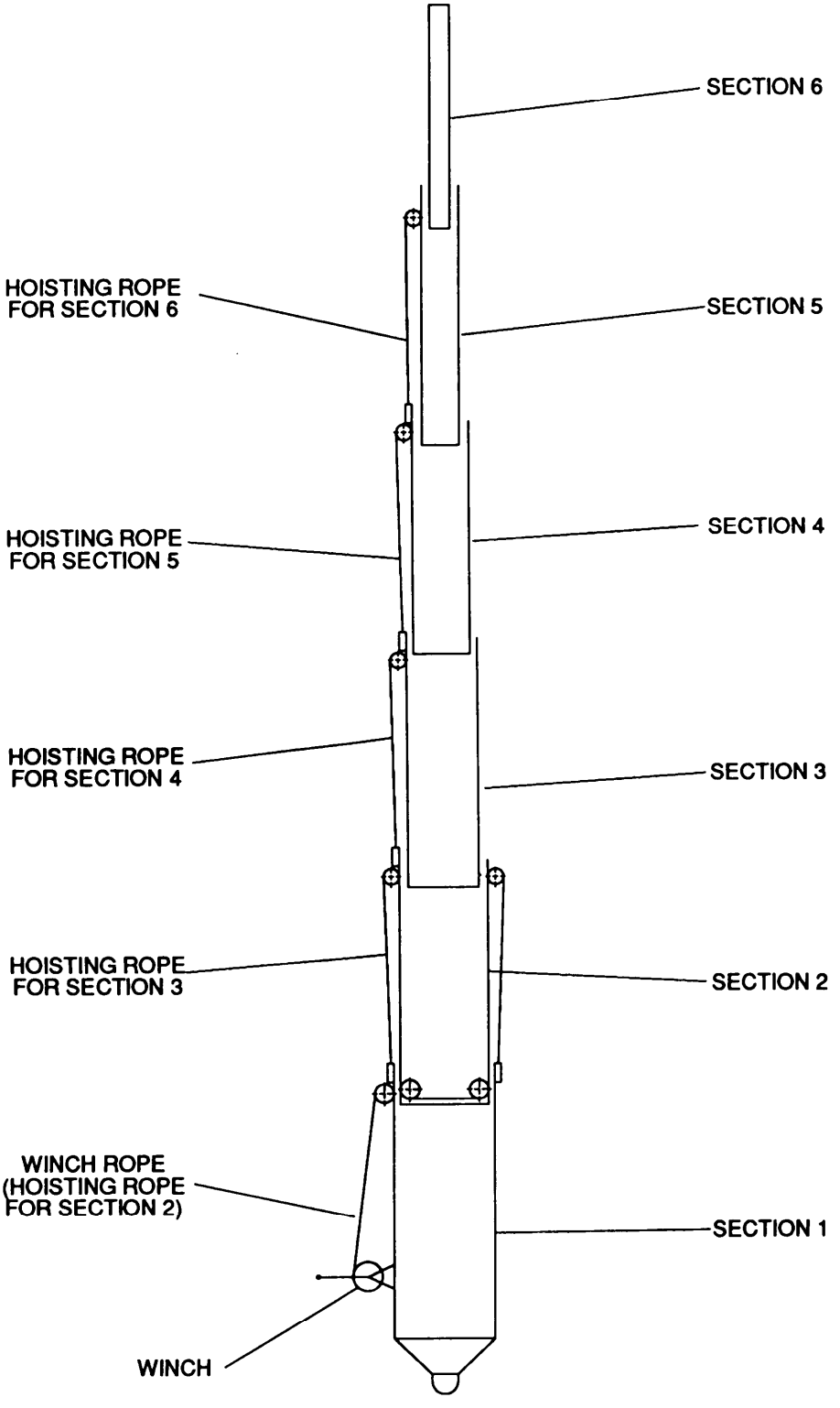


Figure 1-3. Partially Extended Telescopic Mast



NOTE: THIS SCHEMATIC DIAGRAM SHOWS THE TELESCOPIC MAST IN ITS FULLY EXTENDED POSITION.

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Figure 1-4. Hoisting System for Telescopic Mast

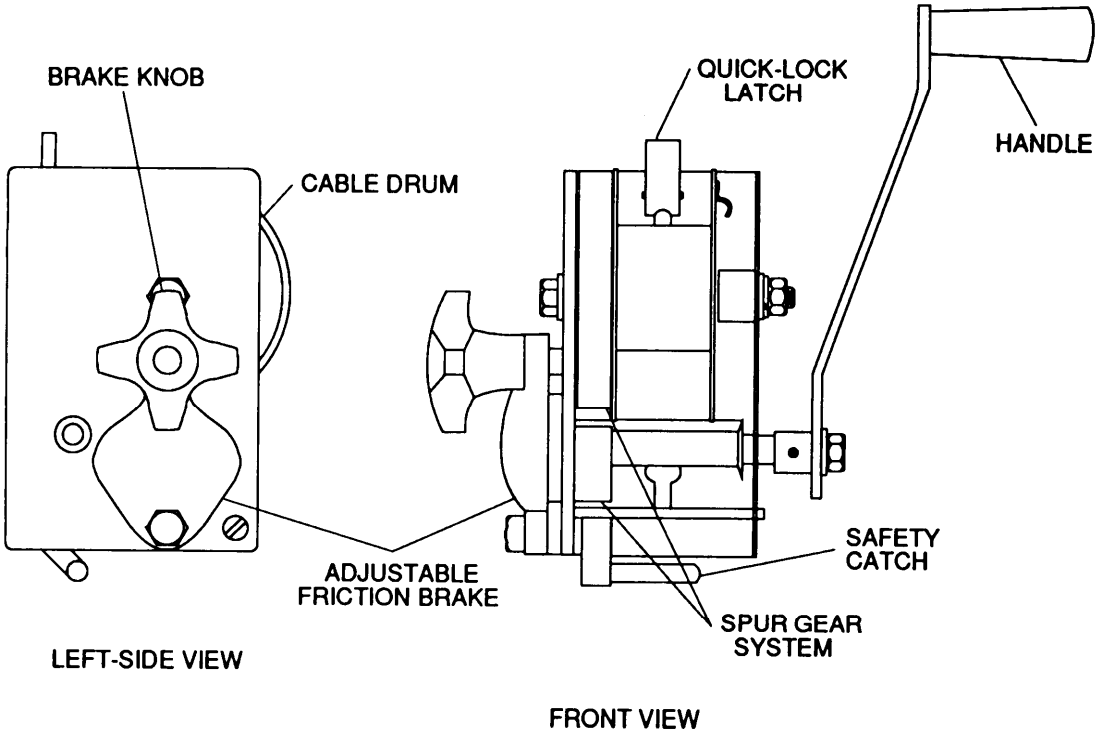


Figure 1-5. Winch Features

passes through the bwer end of section 3 and is secured thereby a cable yoke. This is how the rope supports section 3. As section 2 rises out of section 1, section 3 rises out of section 2.

c. One end of the hoisting rope for section 4 is attached at the top of section 2 (fig. 1-4). From there, the rope runs to a pulley near the top of section 3 (fig. 1-6). It passes over the pulley and inside section 3, where it runs down between section 4 and section 3. It is attached to the bottom of section 4 by a cable clip. As the hand-cranking continues, section 4 rises out of section 3. The last two sections follow in like manner.

d. The telescopic mast is fully extended when the white tape marking on section 2 is fully visible above the top of section 1 (fig. 1-7). A mechanical-stop, designed to control the overlap of the mast sections, prevents further extension of the telescopic mast. No attempt should be made to force the mast any higher.

1-10.1.2 Mast Accessories. The mast accessories comprise the following types of equipment:

a. Items used to erect the telescopic mast (such as the winch and the measuring rope)

b. Items needed to support the installed telescopic mast (such as the base plate, the 12 winder stay assemblies, and the associated stay anchors)

c. Items involved in orienting the telescopic mast (such as the turning lever)

d. Items used for mounting an antenna to the telescopic mast (such as the two extension tubes).

Detailed information about the mast accessories appears in Chapter 2.

1-10.2 Equipment Capabilities and Features. The 15-meter mast has the following capabilities and features:

a. It is supported by four winder stay assemblies at each of three levels.

b. It can support an antenna (or antenna plus associated equipment) that weighs up to 44 pounds (20 kilograms).

c. It can operate satisfactorily in a wind velocity of up to 33 miles/hour (15 meters per second).

d. It can withstand a wind velocity of up to 81 miles/hour (36 meters per second) without permanent damage.

e. It limits the antenna beam deflection of a directional antenna from the desired direction to a maximum of ± 4 degrees at the maximum operational wind velocity of 33 miles/hour.

f. It can operate satisfactorily in a temperature range of -40°F to +120°F (-40°C to +49°C).

g. It is capable of satisfactory operation when erected on a site having an overall slope of up to 3 percent.

h. The orientation of the telescopic mast can be changed by turning the entire telescopic mast, which has a ring and two plates (fig. 1-2) that can rotate. Rotation of the telescopic mast is done with the turning lever. Rotation of the telescopic mast is limited only by the amount of slack that is provided in the rf antenna cable at the top of the mast.

1-11 TABULATED DATA.

Table 1-2 lists physical characteristics and environmental limits of the complete 15-meter mast.

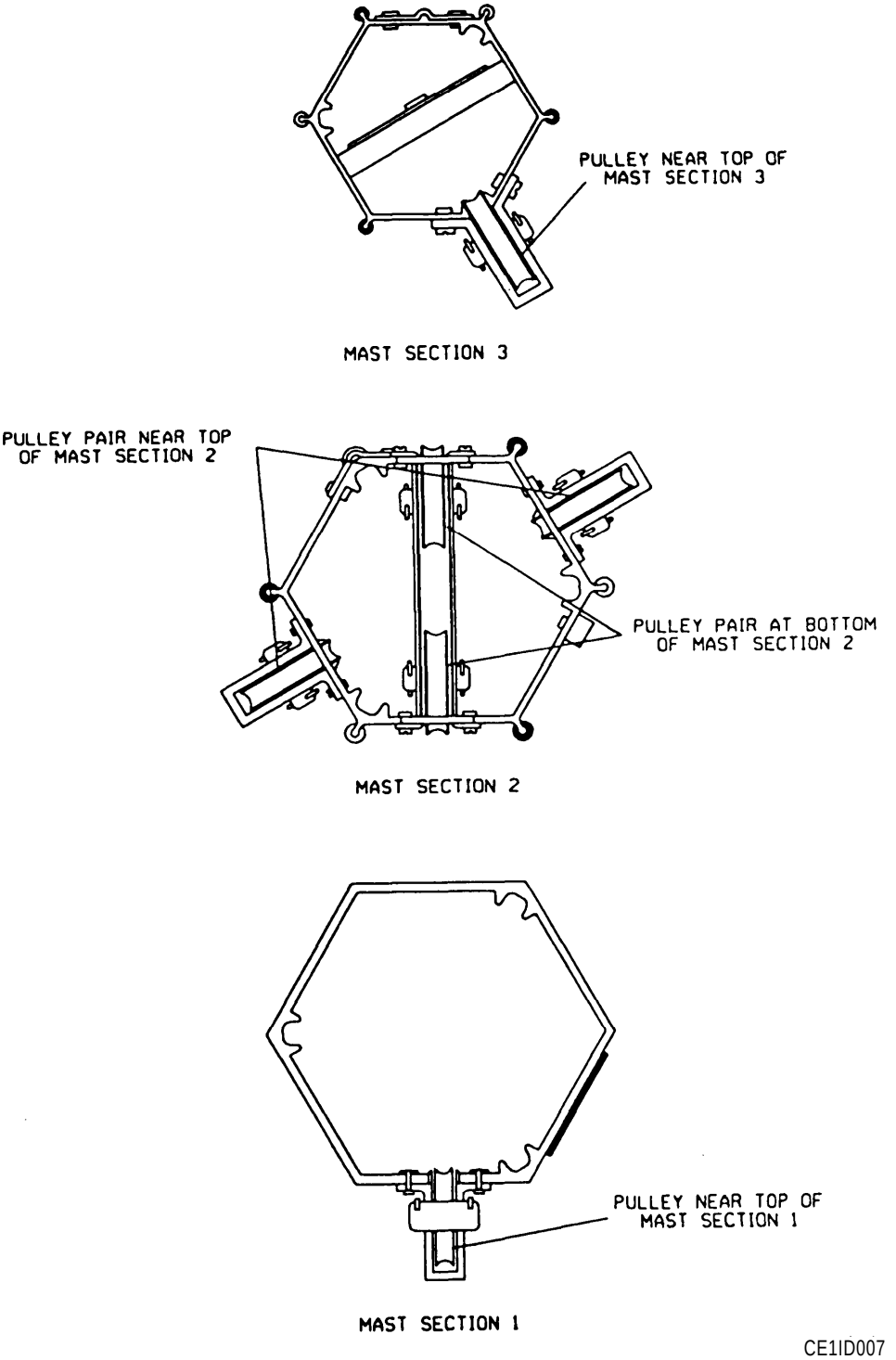


Figure 1-6. Pulleys in Mast Sections 1,2, and 3

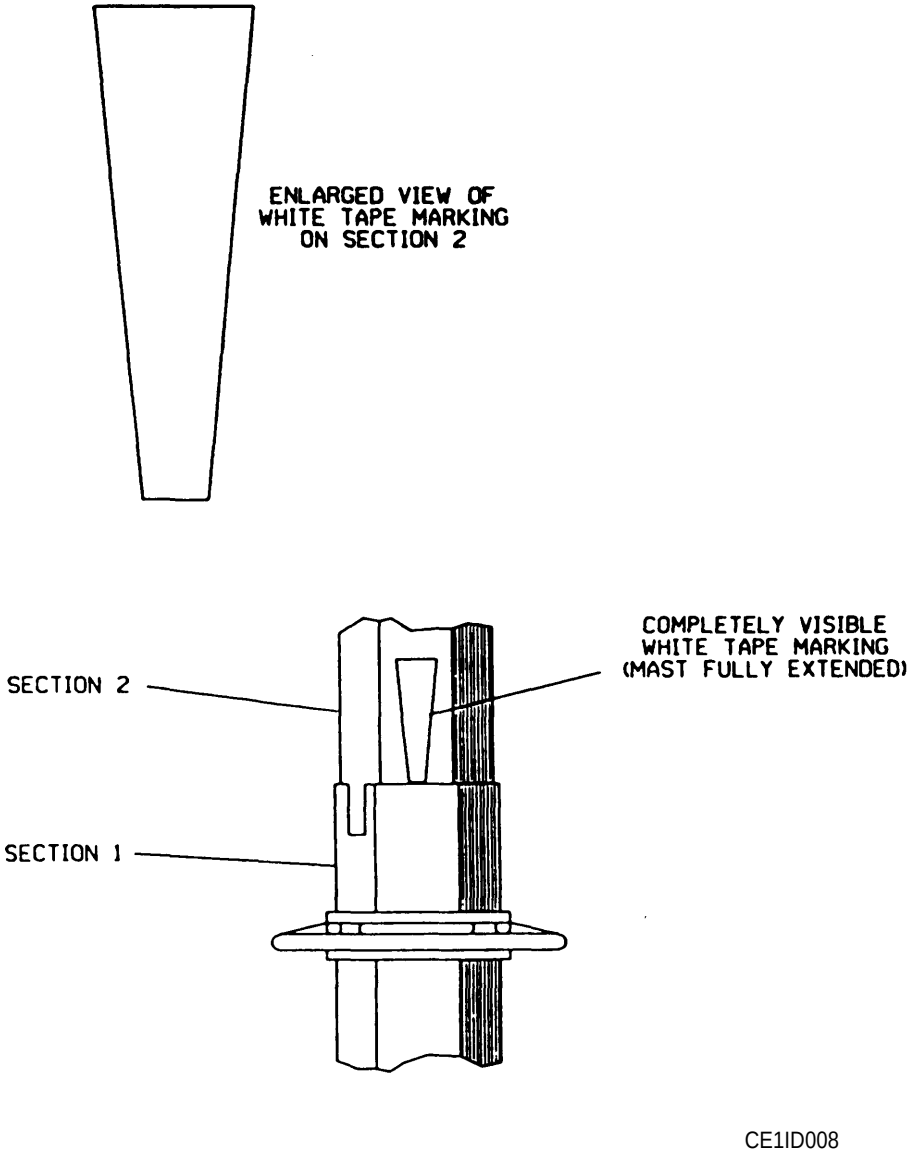


Figure 1-7. Visual Indication of a Fully Extended Telescopic Mast

Table 1-2. Tabulated Data

WEIGHT AND DIMENSIONS	
Height of fully extended mast with two extension tubes employed	49 ft (15m)
Length of fully retracted telescopic mast (transported length)	9.5 ft (2.9 m)
Weight:	
Telescopic mast	110 lb (50 kg)
Full bag of accessories	88 lb (40 kg)
Complete mast system	198 lb (90 kg)
Normal radius to inner set of four stay anchors	26 ft (8 m)
Normal radius to outer set of four stay anchors	33 ft (10m)

NOTE

Stay anchors can be moved outward (up to extent permitted by full lengths of associated winder stay assemblies), as required to provide additional support if ground becomes soft.

ENVIRONMENTAL LIMITS	Storage and Transit	Operation
Temperature	-65°F to +160°F (-54°C to +71°C)	-40°F to +120°F (-40°C to +49°C)
Altitude	Sea level to 40,000 ft (Sea level to 12,192 m)	Sea level to 10,000 ft (Sea level to 3050 m)
Wind speed (Operational)		Up to 33 mph (54 kph)
Survivable		81 mph (130 kph)
Ice thickness (max)		0.5 in. (1.3 cm)

CHAPTER 2

SERVICE UPON RECEIPT AND INSTALLATION

Section I. SITE REQUIREMENTS

2-1 GENERAL.

Three important considerations must be taken into account during site selection for the 15-meter mast (fig. 1-1):

- Safety considerations
- Transmission considerations
- Terrain considerations.

2-2 SAFETY CONSIDERATIONS.

The 15-meter mast must be installed away from powerlines to eliminate the possibility of a powerline falling across any part of the mast installation. If it is ever necessary to erect the mast near a powerline, maintain a distance equal to at least twice the mast height (100 feet) between the mast and the powerline (fig. 2-1).

2-3 TRANSMISSION CONSIDERATIONS.

When an antenna is mounted on the 15-meter mast, it will be approximately 50 feet (15 meters) above the ground (fig. 1-1). The direction the antenna faces must be free of signal obstructions (such as trees, hills, or powerlines) in the transmit/receive path.

2-4 TERRAIN CONSIDERATIONS.

The ideal terrain for erecting the 15-meter mast is level throughout the required 100-footdiameter circular area for the mast and winder stay assemblies. This 100-footdiameter area allows for fully extended winder stay assemblies to be used should ground soften from rainfall.

The ground should also be free of rocks and other obstructions that might hinder the use of guy stakes and stay anchors.

If ground conditions are less than ideal, remember the following:

a. The 15-meter mast operates most effectively when erected on terrain having an overall slope no greater than 3 percent. This means the overall slope of the site it not to exceed 3 feet upward or downward for each 100 feet along the level.

b. If an obstacle like a rock or tree prevents placing a stay anchor at its normal installation location, that stay anchor can be moved anywhere within 3 feet (1 meter) of its normal location.

c. To hold the ground well, a stay anchor must be driven in at least three-quarters of its length with a sledge hammer. If this cannot be done, the ground is too hard. Move the mast to a new location or anchor the winder stay assemblies another way (for example, fasten to some stationary object).

d. Some ground is too soft to hold a stay anchor.

(1) If it takes 12 or more sledge hammer blows to drive the 8 stay anchors three-quarters of their length, the ground is considered firm. The 12 winder stay assemblies can be anchored with 8 stay anchors.

(2) If it takes less than 12, but more than 6 blows to drive a stay anchor, then the ground is soft. It is considered usable if a separate stay anchor holds each winder stay assembly.

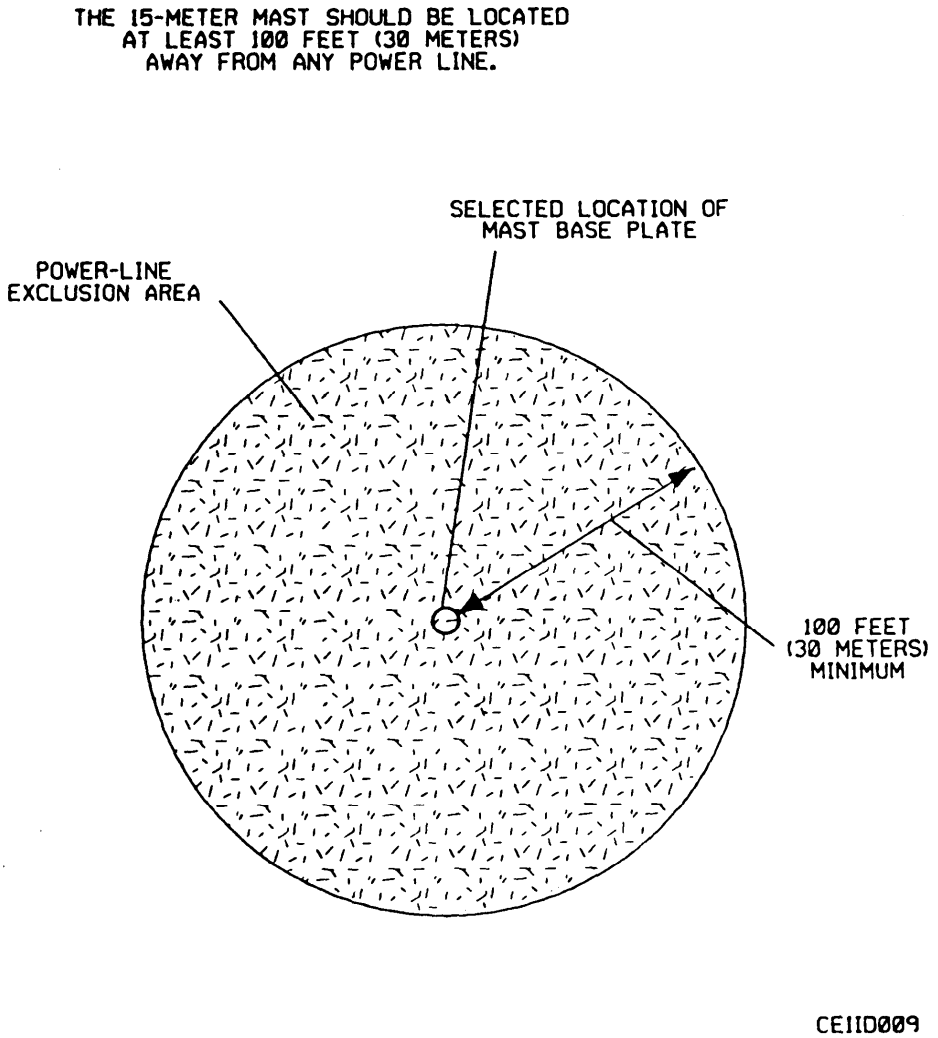


Figure 2-1. Top View Showingthe Powerline Exclusion Area

(3) If it takes six or less blows to drive a stay anchor, the ground is too soft and unusable. Move the mast to a new location or anchor the winder stay assemblies another way (for example, fasten to some stationary object).

Section II. SERVICE UPON RECEIPT OF MATERIEL

2-5 UNPACKING EQUIPMENT.

WARNING

Telescopic mast and a full bag of mast accessories are heavy. To avoid injury, two people are required to lift or carry these items.

CAUTION

Handle telescopic mast with care to avoid damage to equipment.

The 15-meter mast (fig. 1-2) consists of the telescopic mast and the bag of mast accessories (fig. 2-2). Table 2-1 identifies the equipment contained in the bag of mast accessories.

The following tools are needed to unpack the equipment from its shipping containers:

- Claw hammer
- Large screwdriver (12 inches long, 5/16-inch blade)

2-6 INSPECT EQUIPMENT FOR DAMAGE.

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

2-7 CHECK EQUIPMENT AGAINST PACKING LIST.

Locate the packing lists for the telescopic mast and the bag of mast accessories. Check the equipment against these packing lists to see if the equipment is complete. Report all discrepancies in accordance with the instructions of DA Pam 738-750.

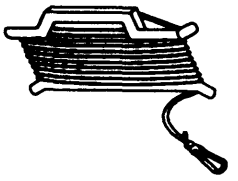
2-8 CHECK FOR EQUIPMENT MODIFICATIONS.

Current Modification Work Orders (MWOs) are listed in DA Pam 25-30. Equipment that has been modified will have the applicable MWO numbers on the MWO IDs located near the nomenclature plates on the equipment. Verify that all modifications have been done. If modifications have not been done, notify the next higher level of maintenance.

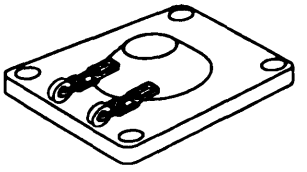
Section III. INSTALLATION INSTRUCTIONS

2-9 TOOLS AND EQUIPMENT REQUIRED FOR INSTALLATION.

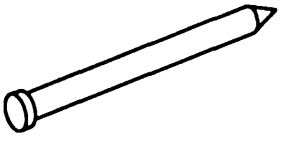
The only items required for installation of the 15-meter mast in addition to the tools and other equipment provided in the bag of mast accessories (table 2-1 and fig. 2-2) are those listed in table 2-2.



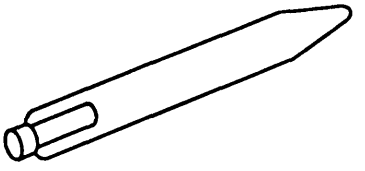
A. WINDER STAY ASSEMBLY



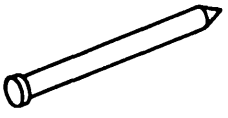
B. BASE PLATE



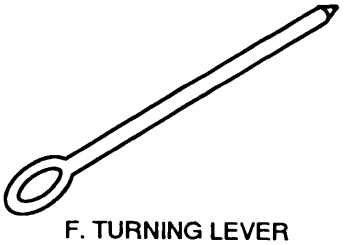
C. GUY STAKE



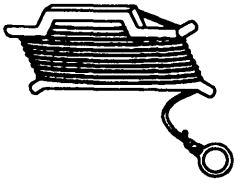
D. STAY ANCHOR



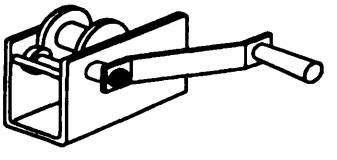
E. YELLOW STAKE



F. TURNING LEVER



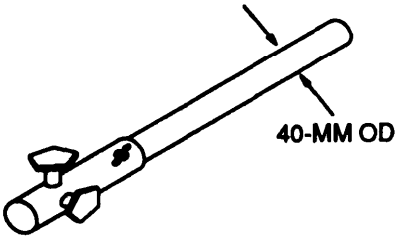
G. MEASURING ROPE



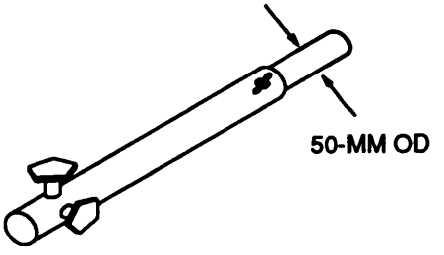
H. WINCH

CE1ID010

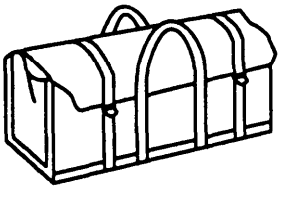
Figure 2-2. Mast Accessories (Sheet 1 of 2)



I. 40-MM OD EXTENSION TUBE



J. 50-MM OD EXTENSION TUBE



CE1ID011

K. ACCESSORY BAG

Figure 2-2. Mast Accessories (Sheet 2 of 2)

Table 2-1. Identification of Mast Accessories

NAME OF ACCESSORY	DESCRIPTION	REFERENCE (Fig. 2-2)	QUANTITY
Winder stay assemblies	With black snaphook Length = 33 ft (10 m)	A	4
	With blue snaphook Length = 49 ft (15 m)	A	4
	With red snaphook Length = 66 ft (20 m)	A	4
Base plate	Length = 11 in. (28 cm) Width = 9 in. (23 cm)	B	1
Guy stake	Length = 15 in. (38 cm)	C	2
Stay anchor	Length = 24 3/8 in. (63 cm)	D	8
Yellow stake	Length = 11 in. (29 cm)	E	1
Turning lever	Yellow Length = 19 in. (49 cm)	F	1
Measuring rope	Yellow Length = 328 ft (100 m)	G	1
Winch	Spur-gear type, with load-reaction brake	H	1
40-mm Outer Diameter (OD) extension	Length = 23 1/2 in. (60 cm); One end of tube can be clamped to cylinder whose diameter is 50 mm. Other end has OD of 40 mm, as shown	I	1
50-mm OD extension tube	Length = 25 1/4 in. (64 cm); One end of tube can be clamped to cylinder whose diameter is 50 mm. Other end has OD of 50 mm, as shown	J	1
Accessory bag	Length = 25 in. (64 cm) Width = 9 in. (23 cm) Height = 12 in. (31 cm)	K	1

Table 2-2. Installation Tools and Equipment

ITEM	TOOL/EQUIPMENT	FUNCTION
1	Sledge hammer, 8 lb (3.6 kg)	Install and remove spikes and guy stakes
2	Magnetic compass, unmounted	Establish raising direction at mast site

2-10 MAST INSTALLATION TEAM.

Two qualified persons are required to install (erect) the 15-meter mast.

2-11 INSTALLATION PROCEDURE.

Once the site for installing the 15-meter mast has been selected (Section I) and the equipment has been unpacked and checked, the actual installation procedure can begin. This procedure consists of two main parts – preliminary steps (para 2-11.1) and raising, extending, and securing the telescopic mast (para 2-11.2).

Paragraph 2-11.3 provides procedural information on the various uses of the winder, which is a part of each winder stay assembly.

WARNING

To avoid injury or death, observe the following during installation procedures:

- Do not erect mast if wind velocity is 33 miles per hour (15 meters per second) or greater.
- Never install mast (including supporting winder stay assemblies) directly under any type of power line.
- Do not attempt to install telescopic mast during an electrical storm or when a storm is imminent.
- Two people are required to lift or carry telescopic mast.
- Wear safety goggles, work gloves, and helmet, as appropriate.

CAUTION

To minimize wear on winder stay assemblies, do not step on them.

2-11.1 Preliminary Steps. These preliminary steps cover determining the location of and installing the base plate, stay anchors and guy stakes, attaching the winder stay assemblies, attaching the antenna, and connecting the antenna signal cable.

NOTE

When laying out ground stakes for antenna stays, be aware that maximum resistance to wind loading is obtained when stays are spaced as close to 90-degrees as possible. Since antenna radials are connected to upper stays, this disposition also ensures optimum antenna coverage. Make sure that mast stays are tight at all times.

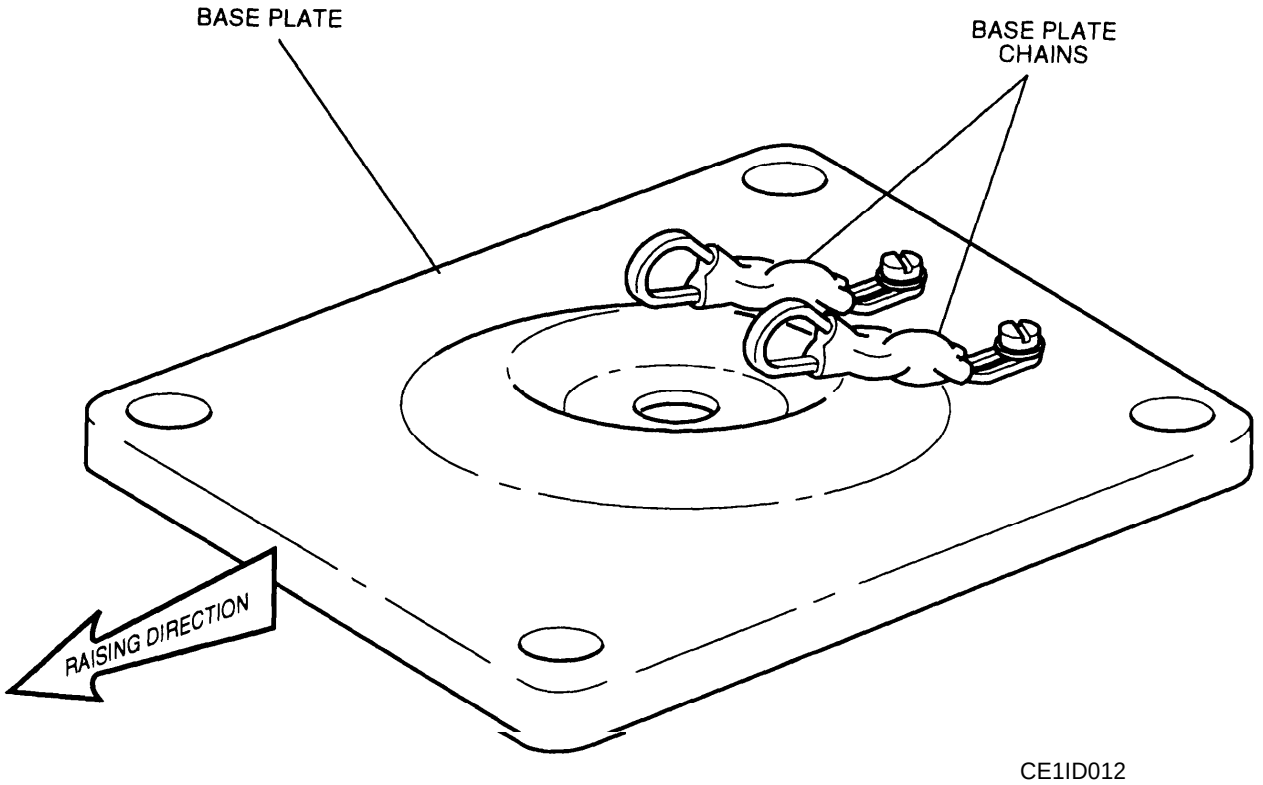


Figure 2-3. Relationship of the Base Plate to the Raising Direction

a. Choose an appropriate location for base plate near center of site.

b. Clear away any ice, snow, or loose sticks and stones.

c. Level the location, if required.

d. Place base plate so the side with two attached chains faces away from the raising direction (fig. 2-3).

e. Using a sledge hammer, install base plate by driving a guy stake into each of two holes at diagonally opposite corners of base plate. Drive stakes until their heads are flush against surface of base plate. If unsuccessful, try stakes in other two holes before moving base plate to another location.

NOTE

A sufficient length of yellow stake must be left exposed above base plate so small end ring of yellow measuring rope can fit over its head.

f. Drive yellow stake half way into ground through center hole of base plate.

g. Unwind measuring rope from its winder and place small end ring overhead of yellow stake.

CAUTION

Stay anchors must be driven into the ground to a depth of 1 inch below winder stay assembly holes for maximum holding ability. If this depth cannot be achieved, anchors must be driven in at least three quarters of their length. If necessary, because of ground conditions, stay anchors can be relocated within 3 feet on either side of specified positions.

h. Stretch measuring rope out along raising direction (fig. 2-4).

i. Using sledge hammer, drive one stay anchor into ground at ring and one at winder location on measuring rope (figs. 2-4 and 2-5).

j. With measuring rope still attached to yellow stake, stretch it out in opposite direction (180 degrees away from raising direction).

k. Drive one stay anchor into ground at ring and one at winder location on measuring rope.

l. Wtih measuring rope still attached to yellow stake, stretch out measuring rope at a right angle (90 degrees) from raising direction (fig. 2-6).

m. Drive third pair of stay anchors into ground at ring and winder location on measuring rope.

n. Stretch measuring rope out in opposite direction from that shown in figure 2-6, and drive fourth pair of stay anchors into ground at ring and winder location on measuring rope.

o. Remove measuring rope from yellow stake and wind rope onto its winder.

p. Stow measuring rope in accessory bag.

q. Remove yellow stake from center hole of base plate using sledge hammer, as required. Stow spike in accessory bag.

r. With two persons handling retracted telescopic mast (fig. 2-7), move it near base plate.

s. Place base of telescopic mast on edge of base plate. Lay the mast on the ground directly opposite the raising direction with handle facing upward. Aline telescopic mast with associated stay anchors (fig. 2-6).

t. Insert turning lever through side holes on base of mast and tail ends of base plate chains (fig. 2-7). Ensure tail ends of base plate chains are outside the holders on mast base.

u. Slide quick lock of masthead cap (fig. 2-8) away from masthead cap, loosen terylene rope, and remove masthead cap from top of telescopic mast and store in accessory bag.

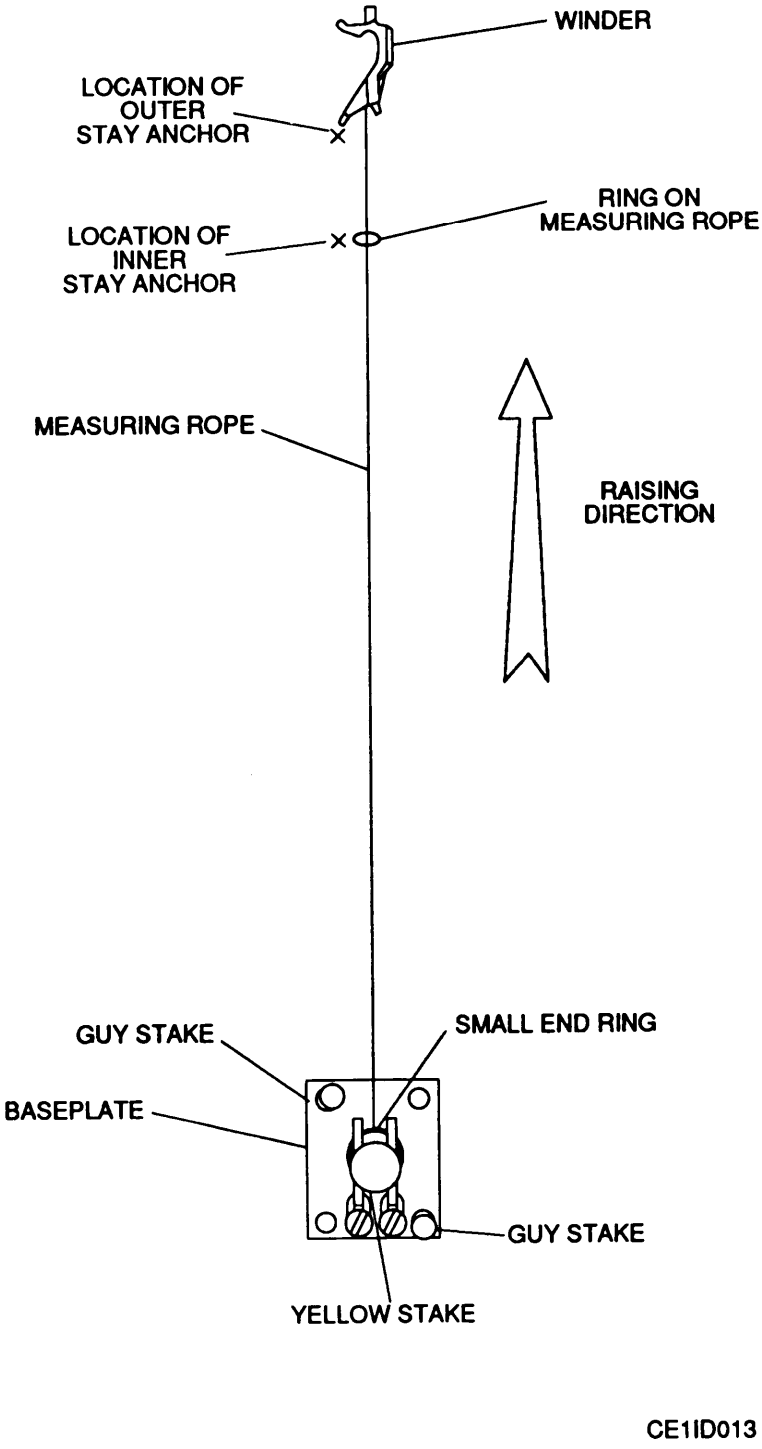


Figure 2-4. Use of the Measuring Rope

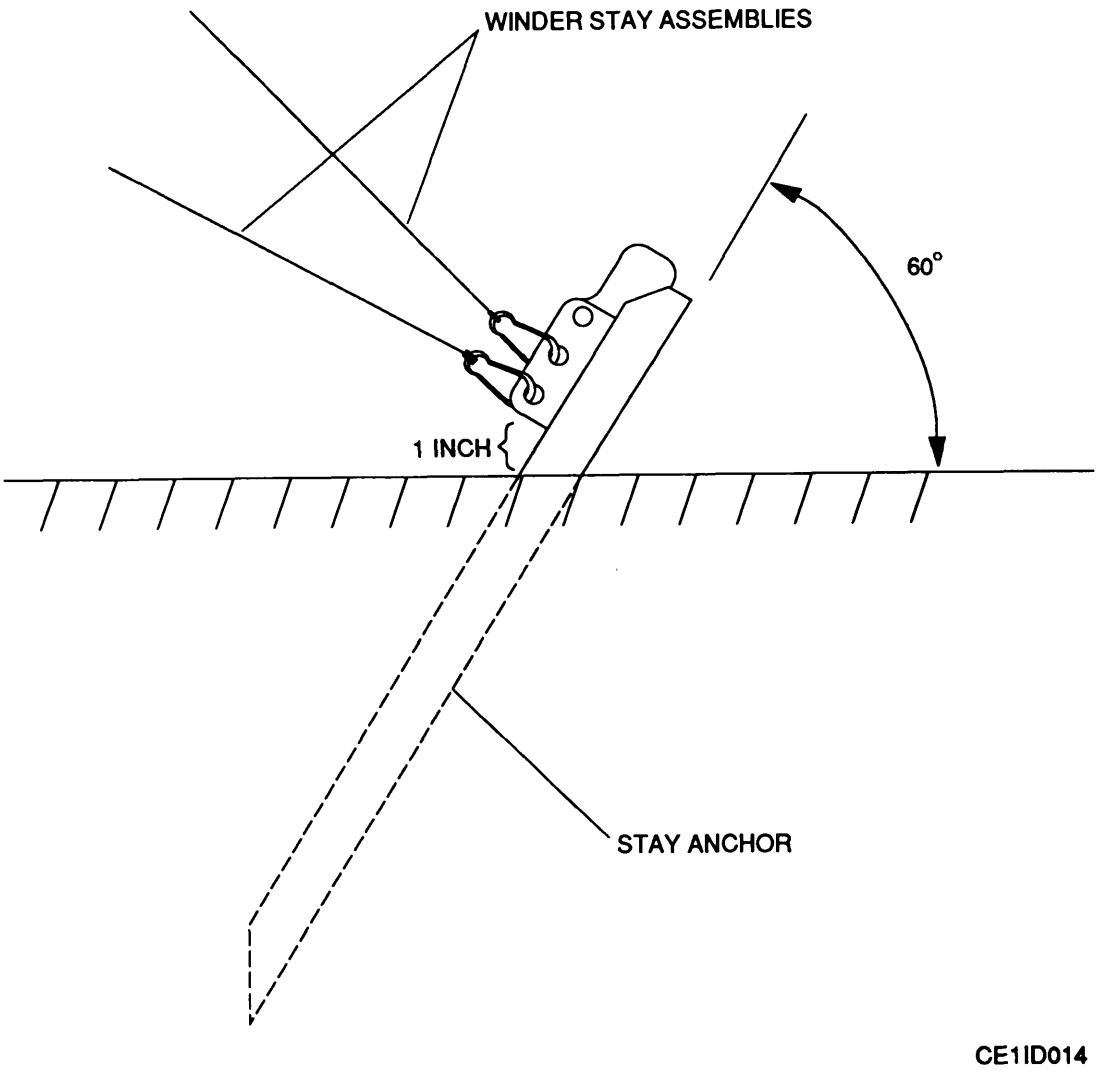


Figure 2-5. Correct Installation of a Stay Anchor

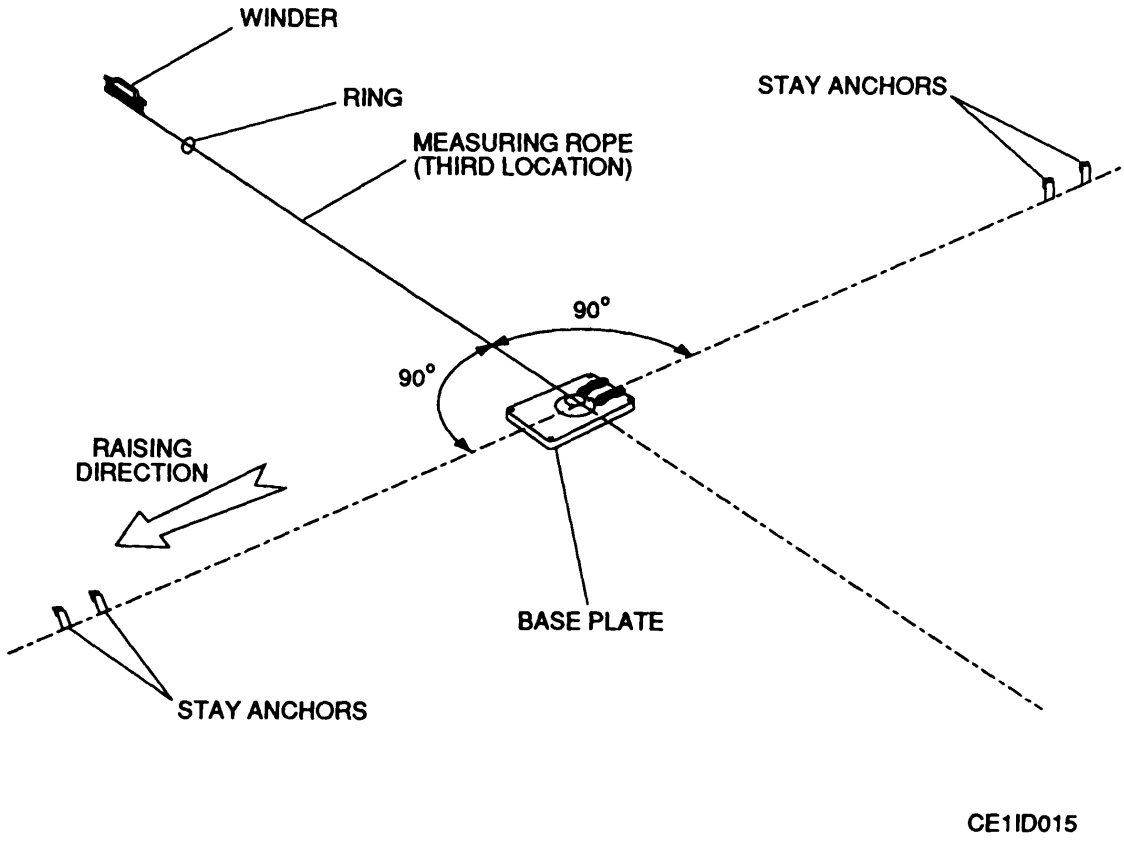


Figure 2-6. Third Location of the Measuring Rope

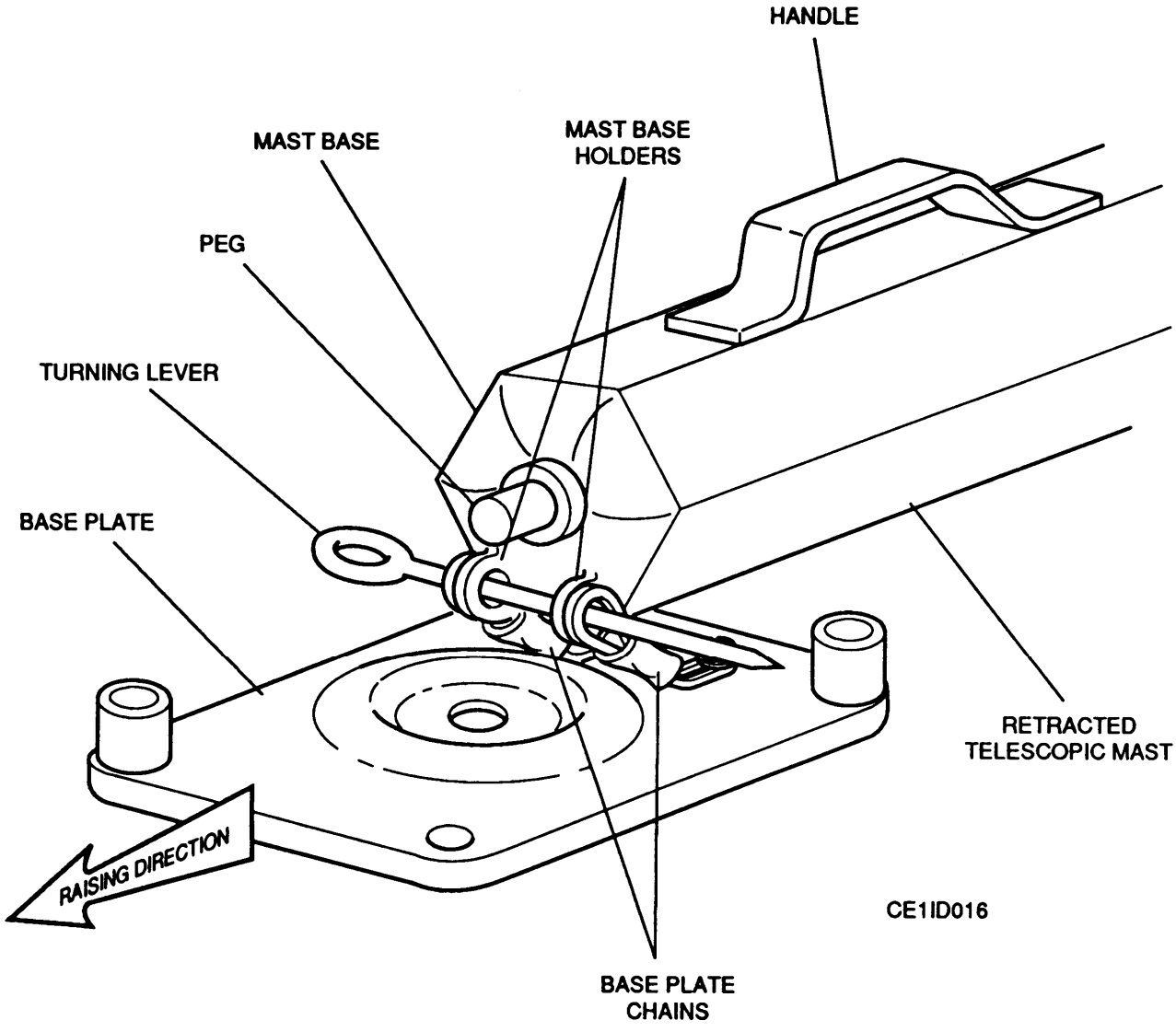


Figure 2-7. Positioning the Retracted Telescopic Mast at the Base Plate

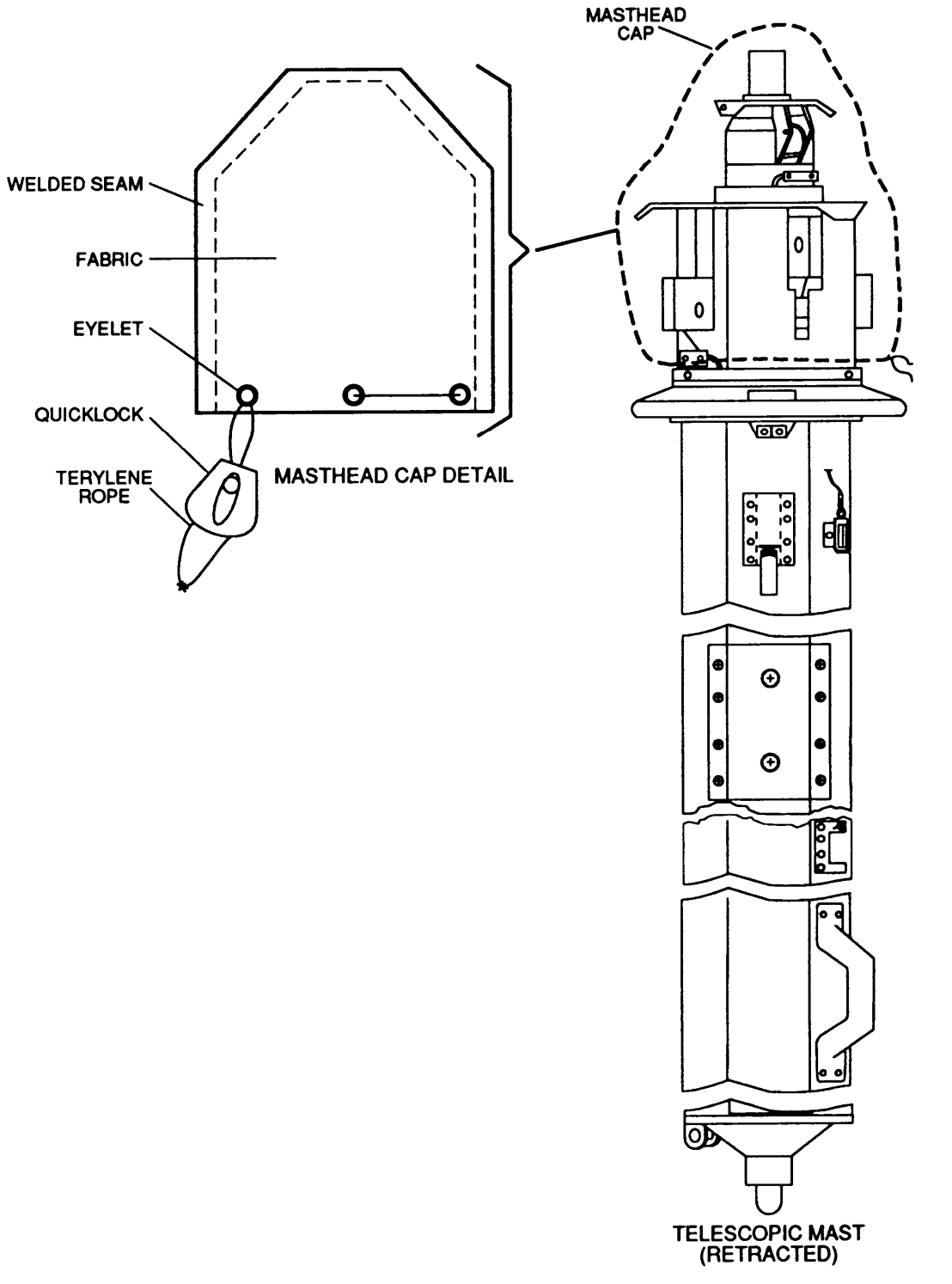


Figure 2-8. Detailed View of the Masthead Cap

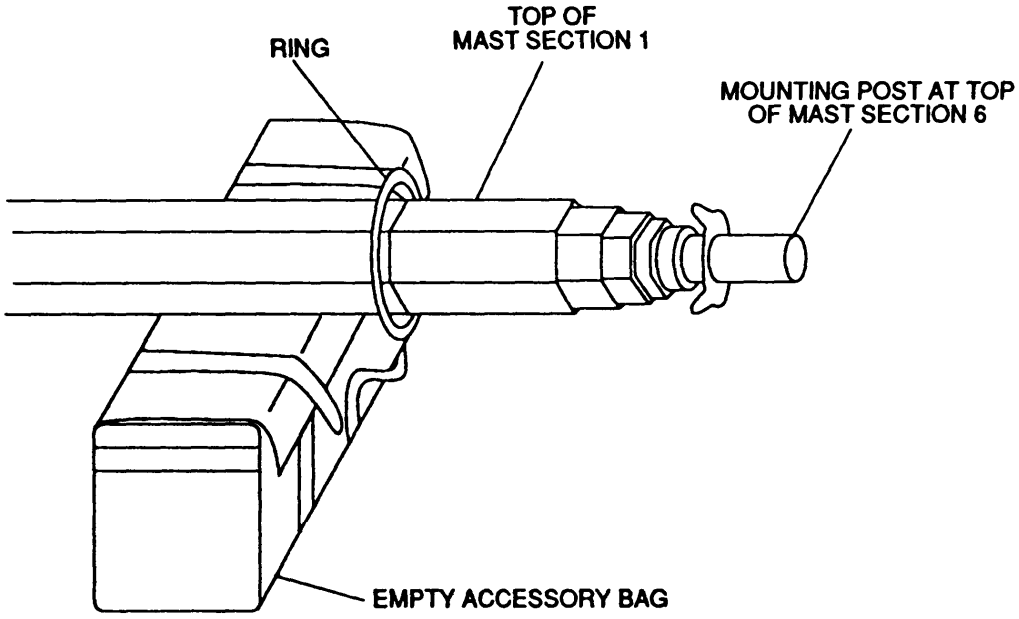


Figure 2-9. Use of the Accessory Bag as a Support

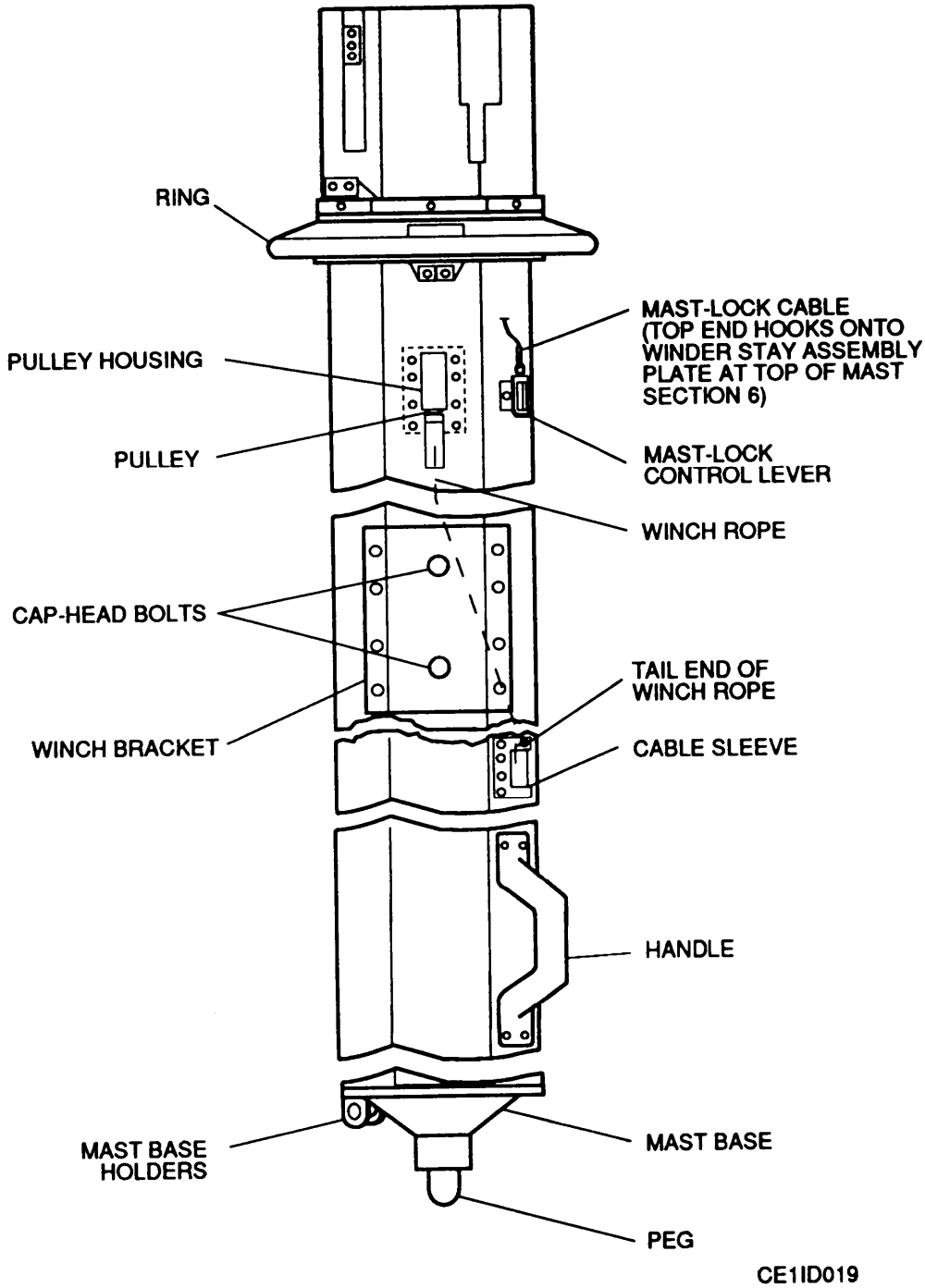


Figure 2-10. Front View of Mast Section 1

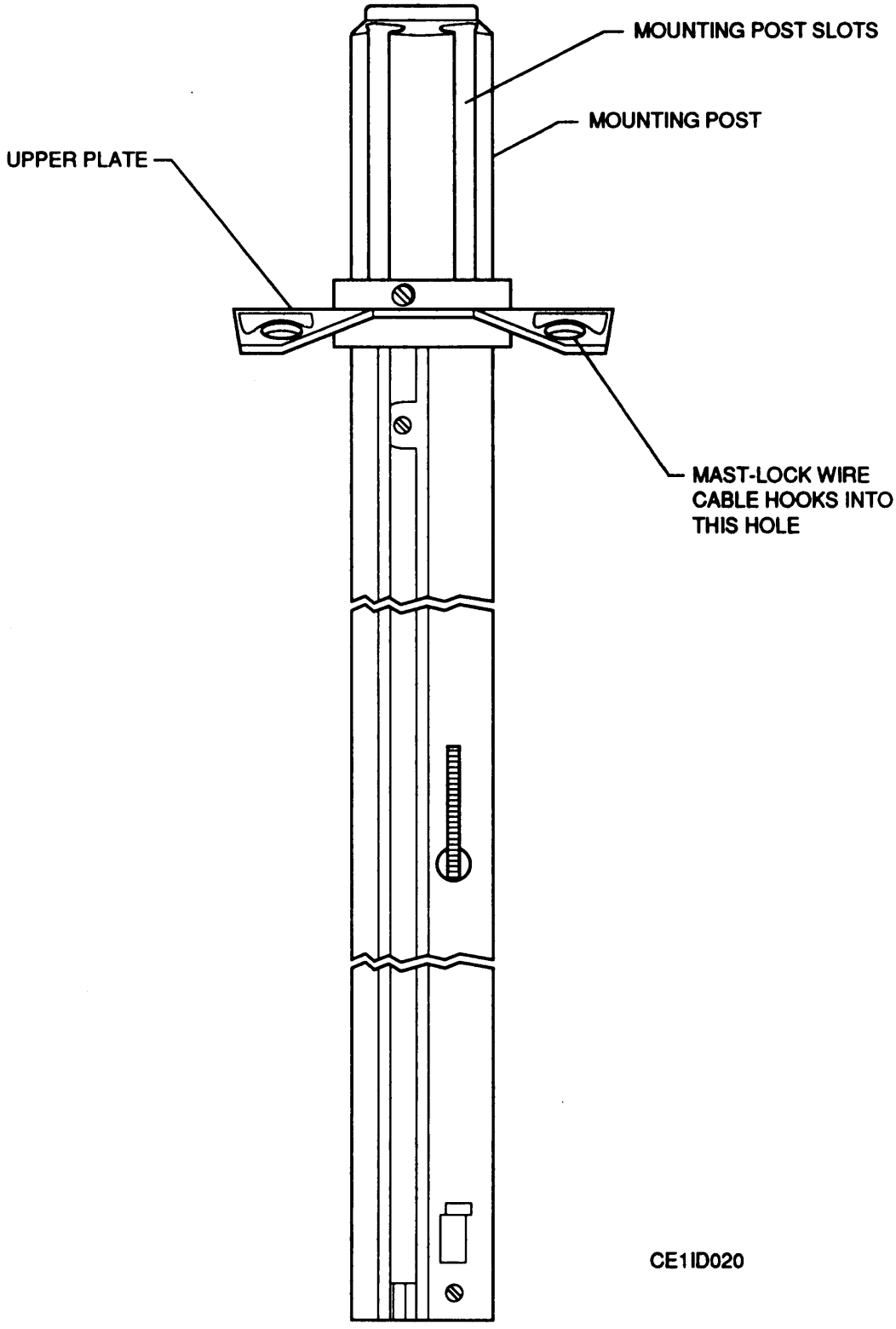


Figure 2-11. Front View of Mast Section 6

v. Remove remaining items from accessory bag and lay them on the ground near base plate.

w. Place empty accessory bag under top of section 1 of telescopic mast (fig. 2-9).

x. Unlock mast sections 1 through 6 as follows:

(1) Pull upon mast-lock control lever (fig. 2-10) to provide play in mast-lock wire cable.

(2) Unhook top of mast-lock wire cable from upper guy plate located at top of mast section 6 (fig. 2-11).

(3) Feed hook end of mast-lock wire cable down side of mast section 1 and through ring (fig. 2-10) so it is free of ring. Secure hook end of mast-lock wire cable to mast lock control lever.

y. Pull on winch rope until approximately one foot of slack is obtained. Then push tail end of winch rope downward to release it from its stored position in cable sleeve on mast section 1.

WARNING

Before mounting winch on mast, inspect cap-head bolts to ensure they are not bent or lose, and weld is not cracked. If any of these defects are detected, do not use the mast. Failure to comply may cause injury to personnel and/or damage to equipment.

z. Mount winch (fig. 2-12) on winch bracket (fig. 2-10) of mast section 1 as follows:

WARNING

To avoid injury to personnel and damage to equipment, do not use substitute for shear pin. Correct winch shear pin must be used for replacement.

(1) With winch oriented as shown in figure 2-12, position winch against mast section 1 (fig. 2-10) so two slotted mounting holes at rear of winch fit over heads of two cap-head bolts located on winch bracket.

(2) Slide winch upward until quick-lock latch secures winch to mast.

aa. To check telescopic mast prior to erection, extend it slightly by pulling winch rope (fig. 2-10) out from pulley approximately 1/2 meter (about 1 1/2 feet). Also, check the following:

CAUTION

Do not extend telescopic mast by pulling on section 6 mounting post (fig. 2-9). This may cause winch rope to kink or twist.

(1) The mast sections run out of one another smoothly. If they do not, refer to Chapter 5, lubrication procedures.

(2) The winch rope has no broken wires or any other signs of serious wear. If rope is faulty, refer to paragraph 5-12.

ab. Attach winch rope to cable drum (fig. 2-12) by inserting tail end of winch rope in cable recess on flange of cable drum and securing it in slot. The cable recess must be fully exposed. If it is not, loosen brake control knob, push winch safety catch toward mast, and turn winch handle until cable recess is fully exposed.

ac. Turn handle of winch clockwise to take up slack in winch rope.

ad. Mount two extension tubes onto top of telescopic mast (fig. 2-13) as follows:

(1) Place 50-millimeter OD extension tube on mounting post at top of mast section 6 (fig. 2-11).

(2) Seat extension tube firmly in place and hand tighten its two attachment knobs securely.

(3) Place 40-millimeter OD extension tube on top of 50-millimeter OD extension tube.

(4) Seat extension tube firmly in place and hand tighten its two attachment knobs securely.

ae. Attach each of four winder stay assemblies with black safety hooks to ring (fig. 2-14).

NOTE

Figures 2-14 and 2-15 show telescopic mast in its vertical rather than its present horizontal position.

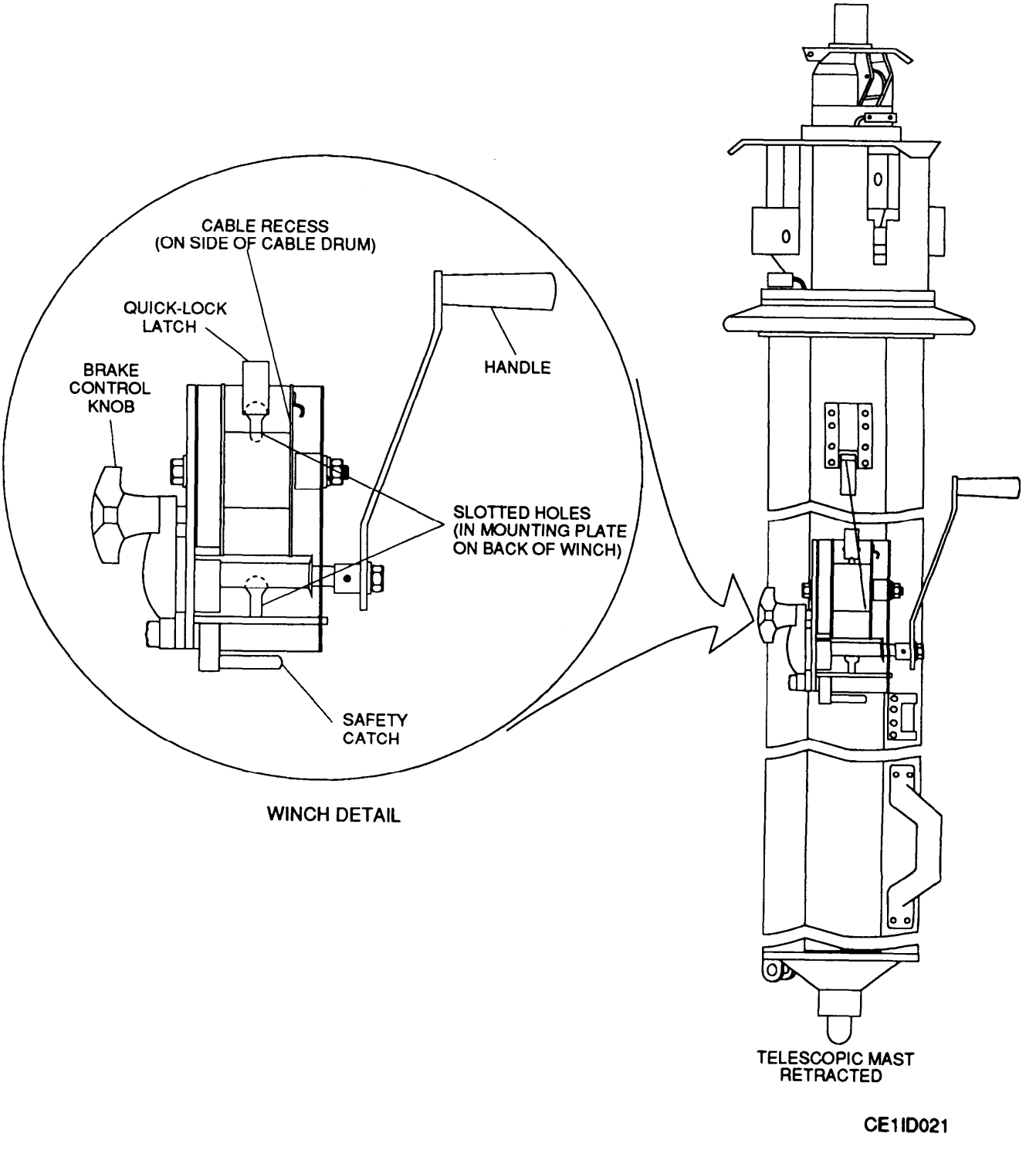


Figure 2-12. Detailed View of the Winch

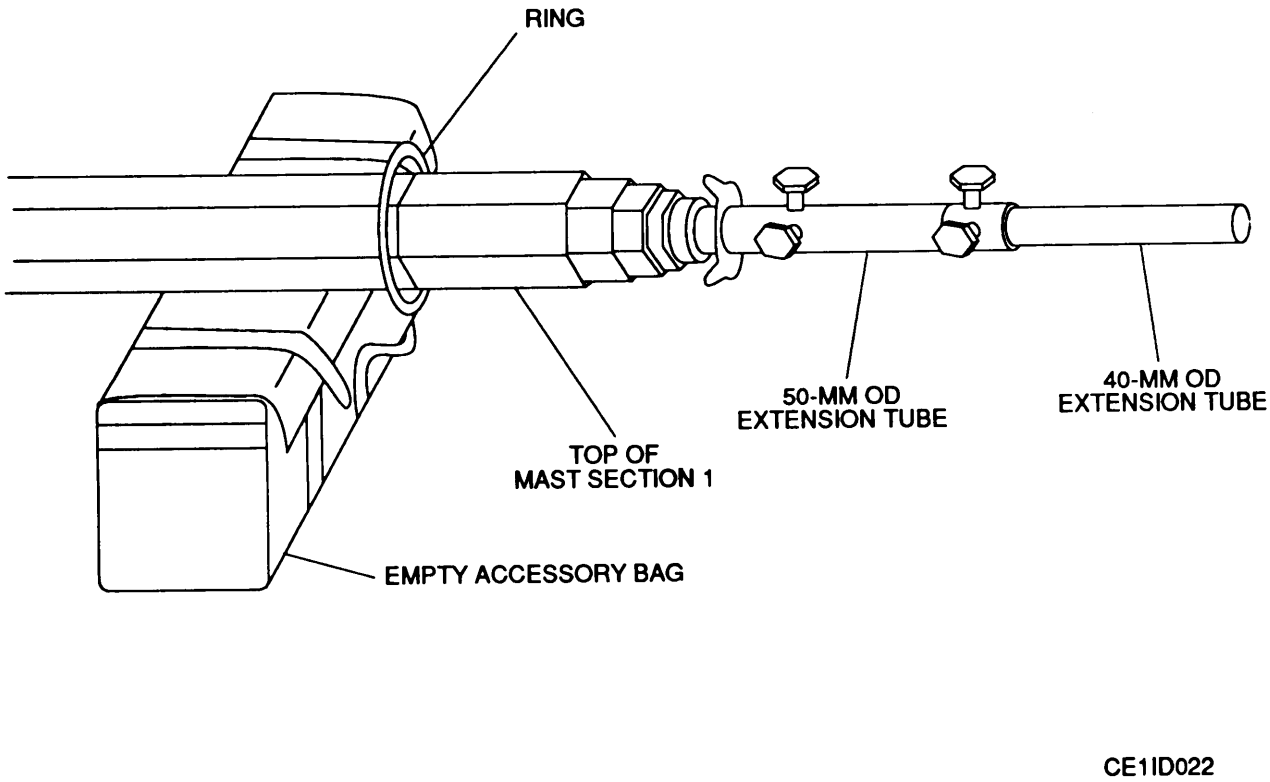


Figure 2-13. Attachment of the Extension Tubes

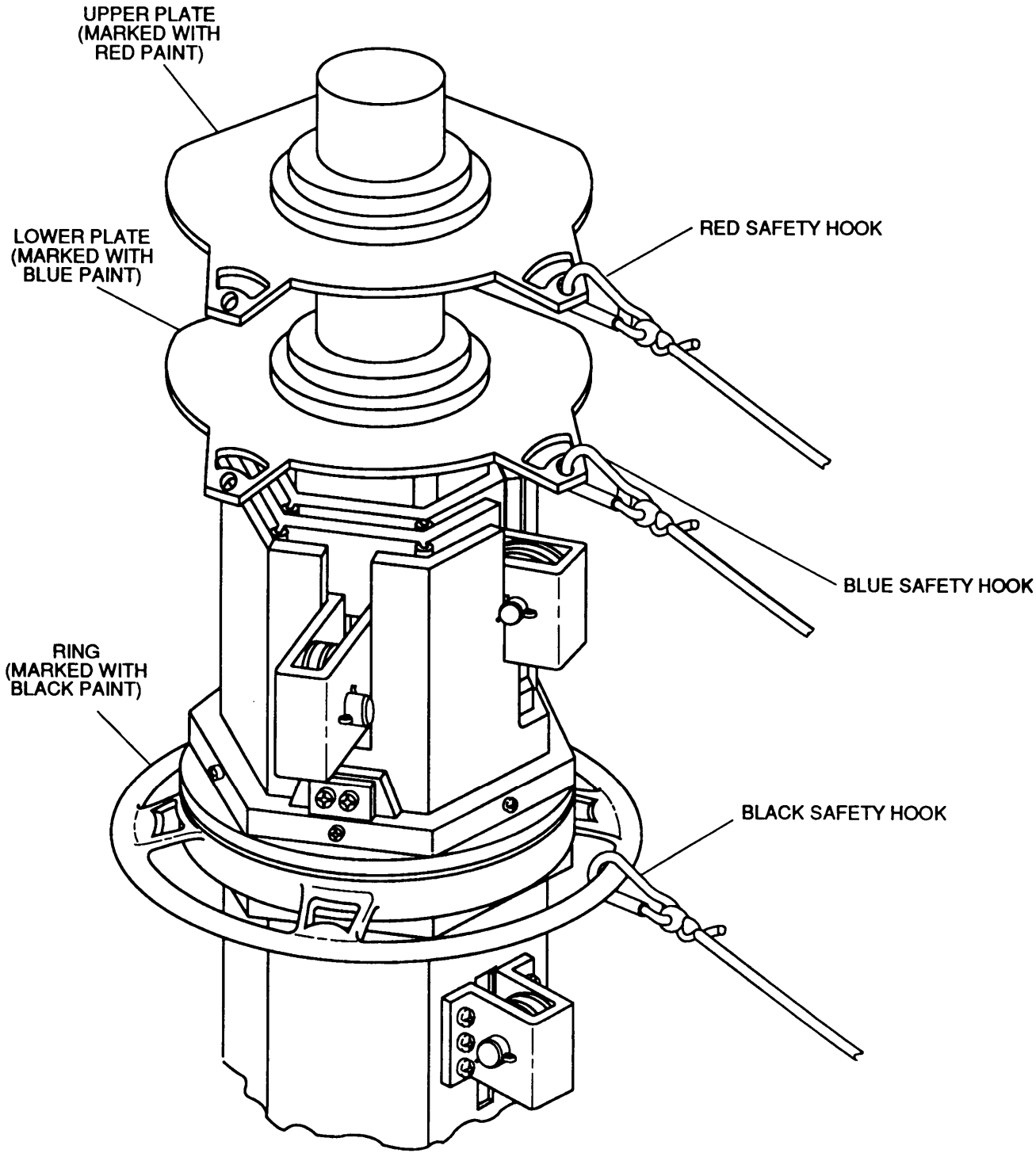
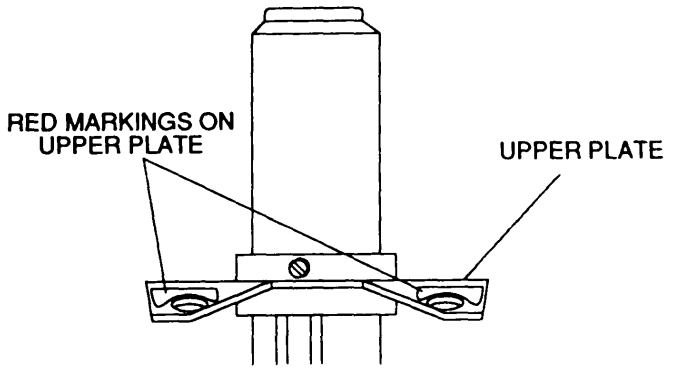
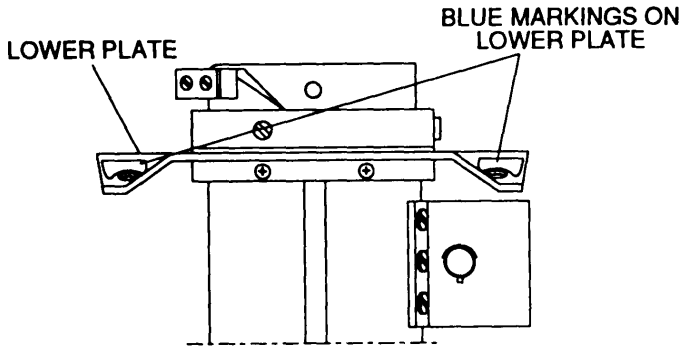


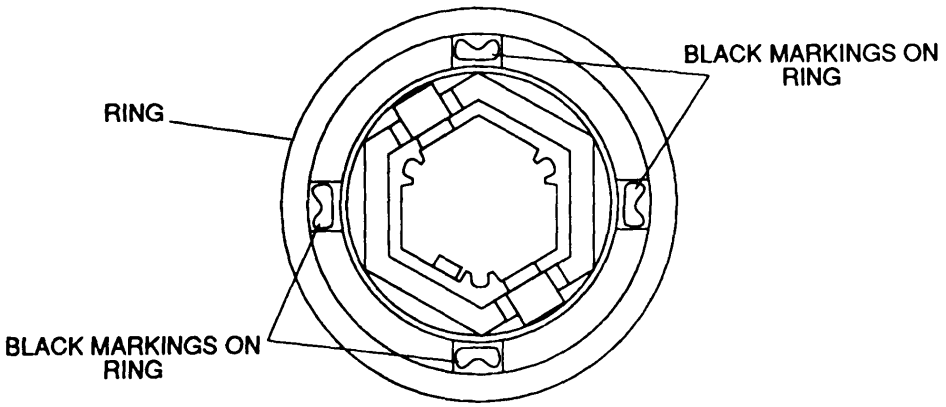
Figure 2-14. Attachment of Color-Coded Safety Hooks



A. FRONT VIEW OF MAST SECTION 6



B. FRONT VIEW OF MAST SECTION 4



C. TOP VIEW OF MAST SECTION 1

CE1ID025

Figure 2-15. Color Coding on the Telescopic Mast for Winder Stay Assembly Attachment

af. Fasten olive-drab (OD) green safety hook (fig. 2-16) of each of three black-coded winder stay assemblies to its respective inner stay anchor as follows:

(1) Of the four black-coded winder stay assemblies attached to ring, select winder stay assembly whose attachment point is closest to ground. Unwind that winder stay assembly (called the rearward winder stay assembly) toward two stay anchors located opposite raising direction (fig. 2-17). Attach safety hook of rearward winder stay assembly to bottom hole of inner stay anchor.

(2) Unwind winder stay assemblies on each side of rearward winder stay assembly. Attach these two sideward winder stay assemblies to inner stay anchors located along two directions at 90 degrees to raising direction (fig. 2-17).

ag Lay fourth black-coded winder stay assembly out on ground in raising direction. This forward winder stay assembly will be attached to bottom hole of inner stay anchor after retracted telescopic mast has been raised.

ah. For stability during raising of telescopic mast, stretch and lock two sideward winder stay assemblies (fig. 2-17).

ai. To avoid pulling telescopic mast past its desired vertical position during raising procedure, lock rearward winder stay assembly at same length as two side-directed winder stay assemblies as follows:

(1) Temporality connect rearward winder stay assembly to a stay anchor used for a sideward winder stay assembly.

(2) Stretch and lock that winder stay assembly (para 2-11.3.1).

(3) Disconnect rearward winder stay assembly from sideward stay anchor (para 2-11.3.2).

(4) Reconnect rearward winder stay assembly to its own stay anchor.

aj. Attach each of four winder stay assemblies with blue safety hooks (fig. 2-16) to lower plate (fig. 2-14).

NOTE

Be sure blue-coded winder stay assemblies proceed from lower plate to their respective stay anchors without crossing one another.

ak. Fasten OD green safety hooks from three blue-coded winder stay assemblies to middle holes of their respective inner stay anchors and stretch and lock winder stay assemblies (see procedure for black-coded winder stay assemblies above). Leave about a foot of play in each winder stay assembly.

al. Lay fourth blue-coded winder stay assembly out on ground in raising direction. This forward winder stay assembly will be attached to middle hole of inner stay anchor after retracted telescopic mast has been raised to its vertical position.

am. Attach each of four winder stay assemblies with red safety hooks (fig. 2-16) to upper plate (fig. 2-14),

an. Lay these four red winder stay assemblies out on ground to their respective stay anchors. Be sure these winder stay assemblies do not cross one another.

ao. Install required radio antenna in accordance with installation instructions for specific antenna to be mounted.

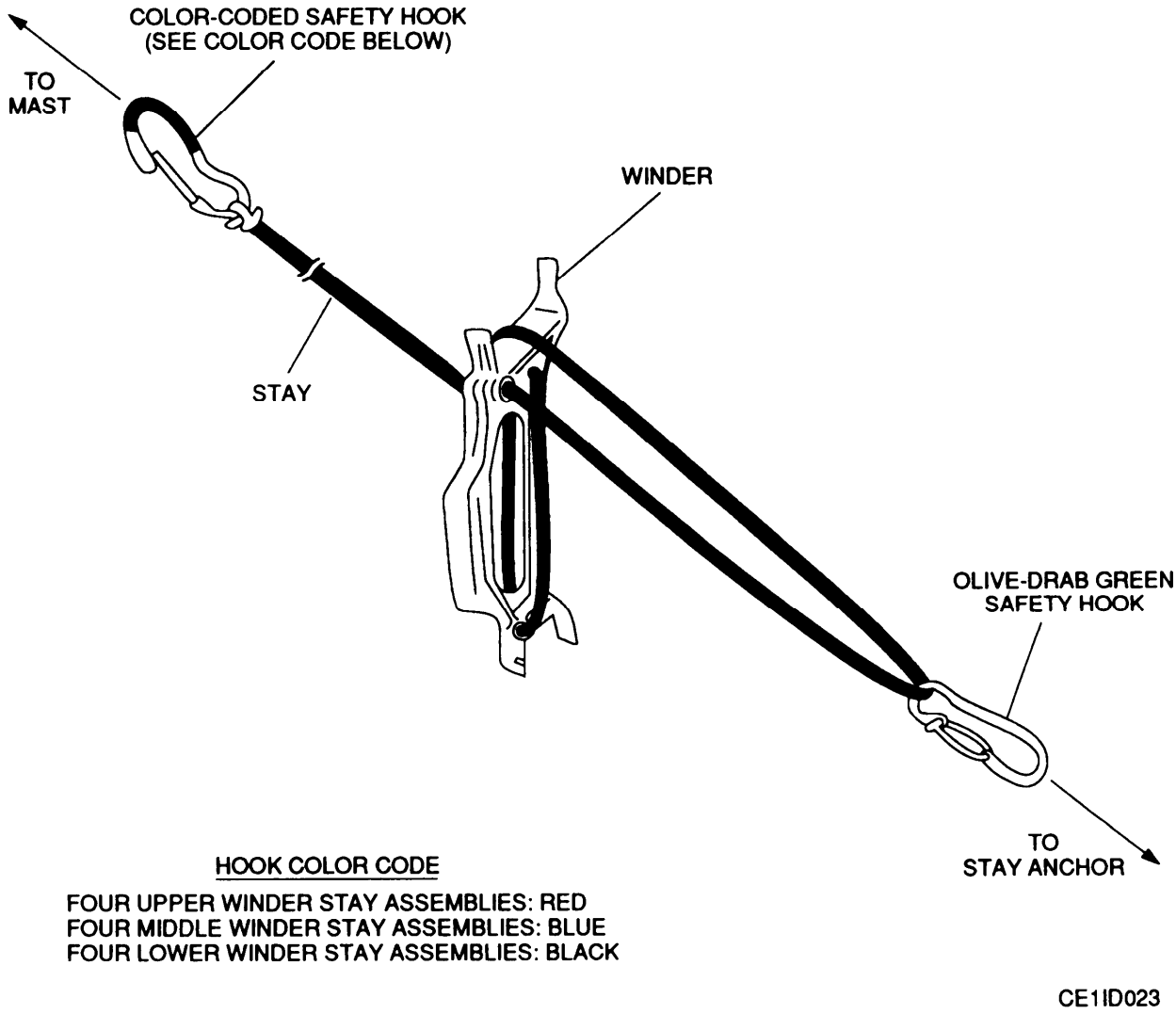


Figure 2-16. Color Code for the Mast Winder Stay Assemblies

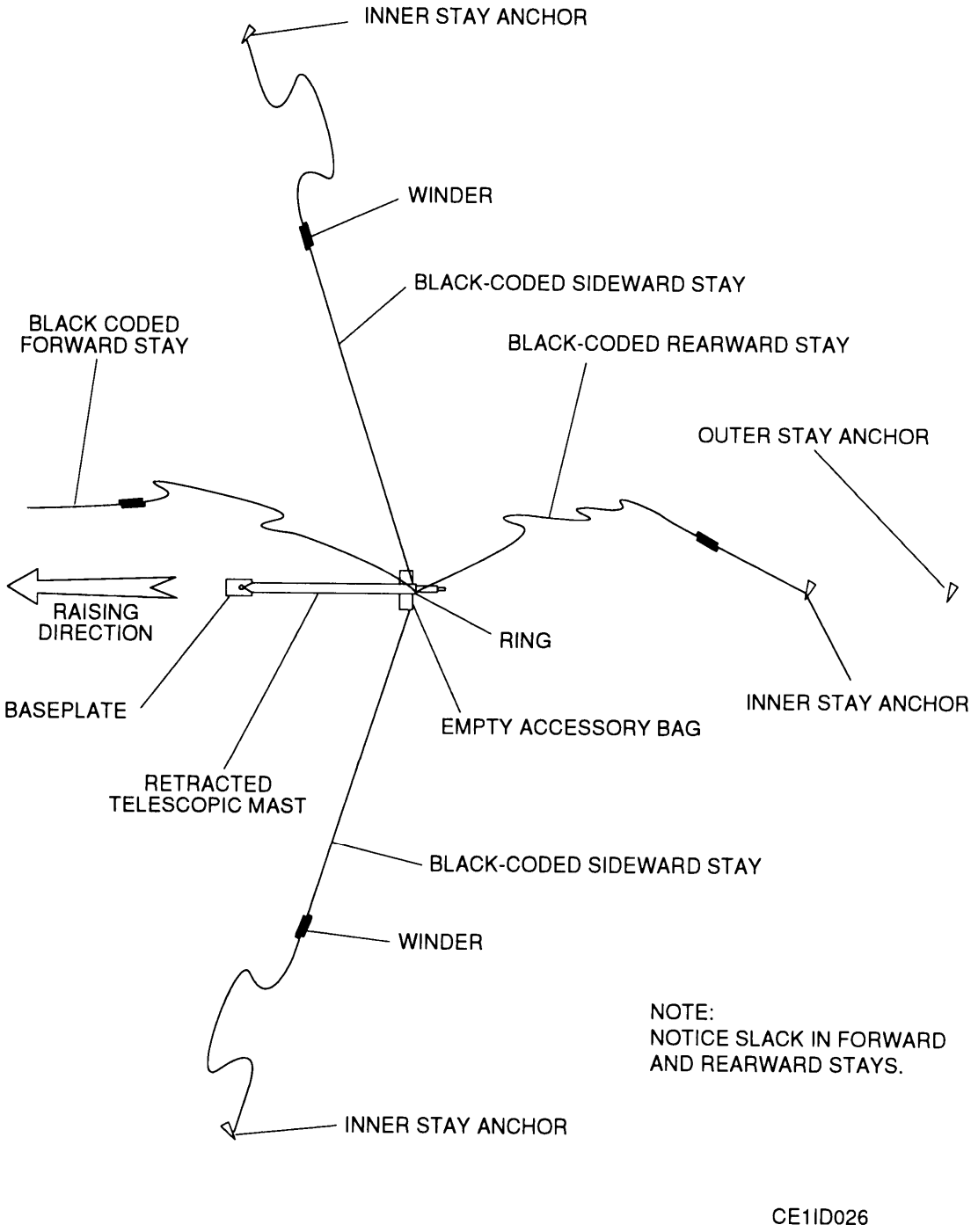


Figure 2-17. Top View of Telescopic Mast Prior to Rising

CAUTION

Antenna cable retention must provide sufficient rf antenna cable between cable-retention point at top of mast and connection to antenna so a 180-degree rotation of antenna in either direction from cable-retention point is possible. Otherwise, undue strain on and possible damage to mast, rf antenna cable, and/or antenna could result.

ap. Position rf antenna cable so that, as telescopic mast is raised, the cable will unwind without any interference.

2-11.2 Raising, Extending, and Securing the Telescopic Mast.

WARNING

To avoid injury, use two people to raise, extend, and secure the telescopic mast.

CAUTION

While raising mast to the vertical, observe tension generated in side stays due to uneven terrain and variations in picket location. Too much tension can easily damage winders or stays. Make note of tension on stays; if more than slight tension is developed, return mast to the horizontal. Adjust side stays by adding a small amount (6 to 10 inches) of slack before attempting to raise the mast again.

a. Back off two sideward winder stay assemblies to allow one foot of slack in stays.

a.1. With one person lifting and then pushing on telescopic mast and other person pulling on foremost winder stay assemply (fig. 2-18), raise telescopic mast slowly and steadily on base plate in selected raising direction.

b. During this raising procedure, team member who is lifting and pushing must guide peg on base of telescopic mast into hole at center of base plate.

c. When telescopic mast is vertical (fig. 2-18), the person who had been pushing on telescopic mast holds mast in upright position. The other person then:

(1) Secures unattached black-coded winder stay assembly and unattached blue-coded winder stay assembly to bottom hole and middle hole, respectively, of inner stay anchor along raising direction.

(2) Stretches and locks (para 2-11.3.1) the black-coded winder stay assembly.

(3) Stretches the blue-coded winder stay assembly and then locks it after providing about a foot of slack in that winder stay assembly.

d. One person checks straightness of raised telescopic mast and directs second person who stretches and locks four black-coded winder stay assemblies.

e. Loosen brake knob on winch (fig. 2-12).

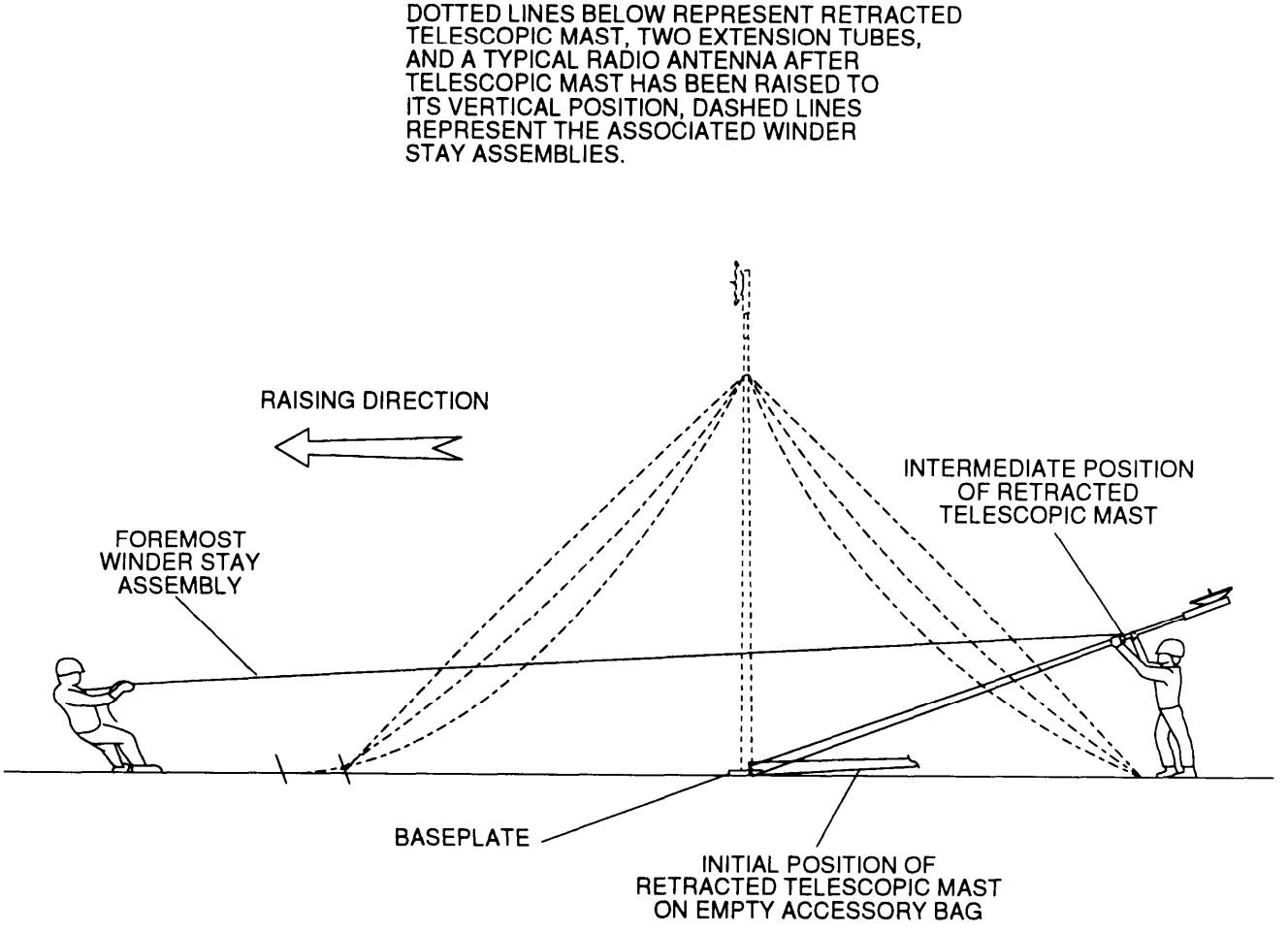


Figure 2-18. Raising Retracted Telescopic Mast

WARNING

Control winch with a firm grip on the handle at all times. When raising mast, listen for clicking sound from winch safety catch on ratchet. If sound is not heard, stop raising procedure and lower mast to its retracted position. Adjust brake as necessary to ensure safe, controlled lowering of mast. Inspect winch for damaged or missing safety catch spring. Safety catch spring connects the safety catch lever to the winch housing near the brake control knob.

CAUTION

Be sure telescopic mast is not subjected to bending during mast extension procedure.

f. Using winch handle, one person winches up mast sections 2 through 6. Second person assists as follows:

(1) Periodically adjusts slack in blue winder stay assemblies (para 2-11.3.3).

(2) Observes overall mast extension process to ensure it is proceeding smoothly and s

g. Continue mast extension until white tape marking on section 2 becomes fully visible (fig. 1-7). Telescopic mast is now fully extended.

CAUTION

To avoid damage to telescopic mast, do not try to force mast any higher. (A mechanical stop controls overlap of mast sections.)

h. Final position of winch handle is upward, parallel to telescopic mast. If it is not, press winch safety catch (fig. 2-12) toward telescopic mast and lower mast with winch handle until handle is in proper position.

i. Hand-tighten brake knob securely.

CAUTION

Do not overtighten winder stay assemblies in following steps or telescopic mast may bow.

j. One person checks straightness of upper sections of mast and directs second person who stretches and locks four blue-coded winder stay assemblies. These actions affect mast straightness only as high as lower plate.

WARNING

After completing mast installation, mark all stays with streamers or approved markers in accordance with TB SIG 291. Failure to mark guys could result in serious injury to personnel.

NOTE

Be sure that red-coded winder stay assemblies proceed from upper plate to their respective stay anchors without crossing one another.

k. Fasten OD green safety hook of each of the four red-coded winder stay assemblies to bottom hole of its respective outer stay anchor.

l. One person checks straightness of upper sections of mast and directs second person who stretches and locks four red-coded winder stay assemblies. These actions affect mast straightness only as high as upper winder stay assembly plate.

m. Recheck all winder stay assemblies for tautness. Make them taut, as required, to keep mast straight and to minimize intermodulation distortion.

n. Recheck all stay anchors and pound them in more securely if required.

o. Remove turning lever from sideholes and chains at base of telescopic mast (fig. 2-7). Insert turning lever through side holes of mast, ensuring that turning lever does not go through chains.

p. Return to accessory bag any other items no longer in use.

q. Return installation tool and equipment to their appropriate storage locations.

r. Rf antenna cable can now be connected to associated radio set, in accordance with applicable instructions.

2-11.3 Winder Usage. After a winder stay assembly has been attached between the telescopic mast and a stay anchor, the winder is used during installation and disassembly of the 15-meter mast as described in the following paragraphs.

2-11.3.1 Stretching and Locking a Winder Stay Assembly. Proceed as follows to stretch a winder stay assembly and lock it in position during the installation of a 15-meter mast:

a. Using winder handle, hold winder at right angles to stay (fig. 2-19).

b. Slide winder along that part of stay passing through winder locking hole, until winder is at desired position on stay.

c. Wrap excess stay onto winder as follows:

NOTE

During this wrapping procedure, make sure that stay is being wrapped onto winder from end of stay (fig. 2-19). Do not wrap those parts of stay that are on either side of winder locking hole. Othewise, winder does not function properly in subsequent steps and stay has to be rewrapped.

(1) While facing telescopic mast, hold winder handle with left hand and pull end of stay down against winder with other hand (fig. 2-20).

(2) While pulling on stay firmly with right hand, guide end of stay down and between stay retainers at bottom of winder and then upward between stay retainers at top of winder (fig. 2-20). Figure 2-21 shows winder with one complete wrap of excess stay.

(3) Repeat this wrapping procedure until all excess stay has been wound onto winder. This requires sliding winder down toward stay anchor as needed to finish taking up any slack in stay with a complete wrap.

d. Using both hands, push on winder until winder stay assembly is stretched taut without bending telescopic mast.

e. Lock taut winder stay assembly as follows:

(1) Rotate winder up and toward stay anchor (fig. 2-22) until it is parallel to stay.

WARNING

Both sections-in doubled-up part of stay must be placed completely under winder catch and over associated lip (fig. 2-21) on winder. Otherwise, winder stay assembly does not fully lock and a hazardous condition exists.

(2) Hook doubled-up part of stay (fig. 2-21) under winder catch.

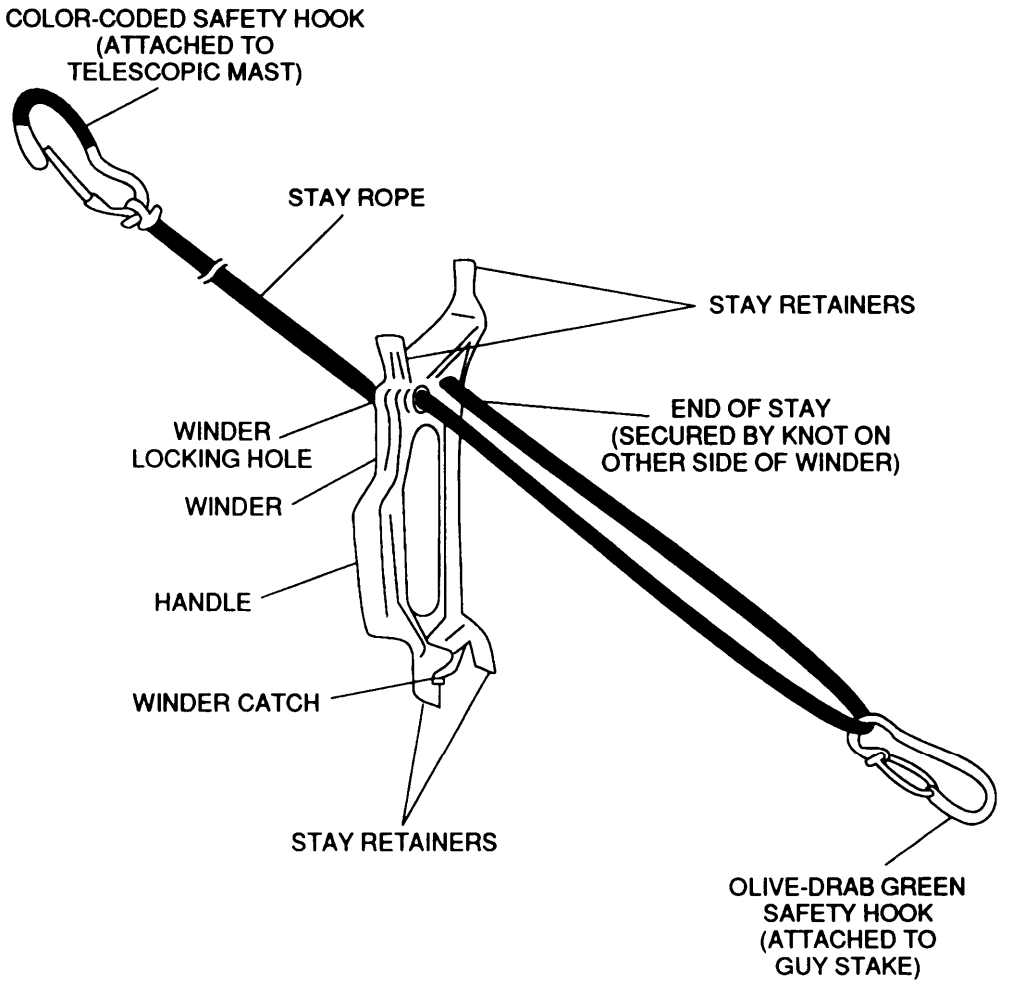


Figure 2-19. Stay and Winder Features

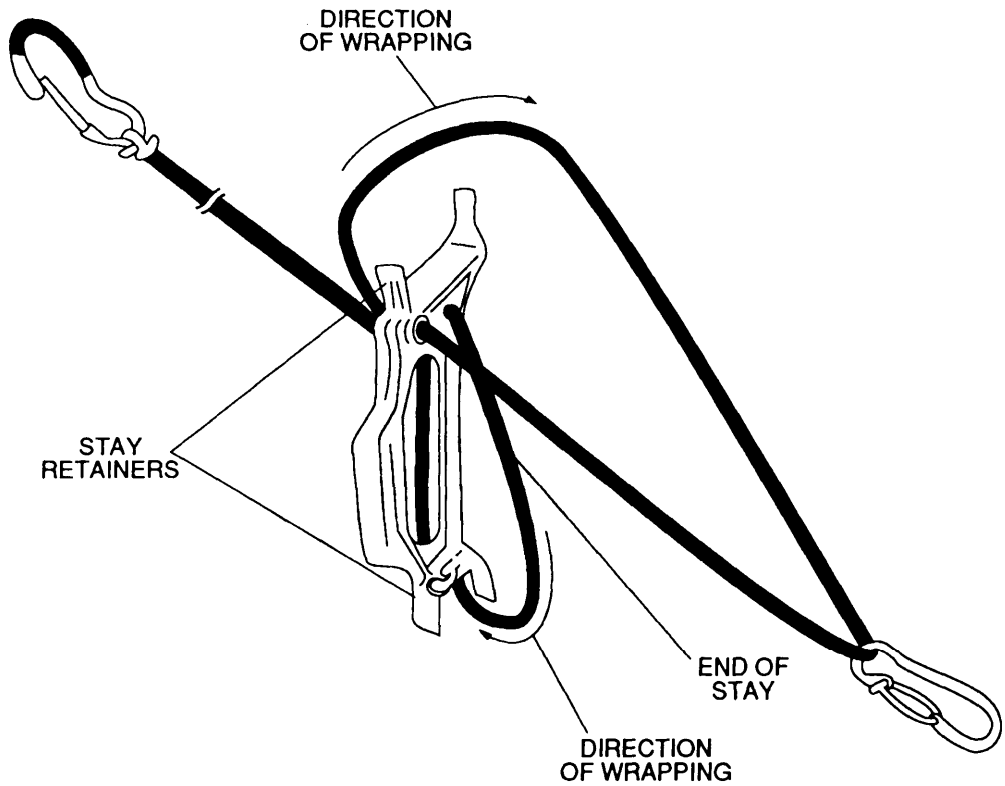


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Figure 2-20. Wrapping Excess Stay onto Winder

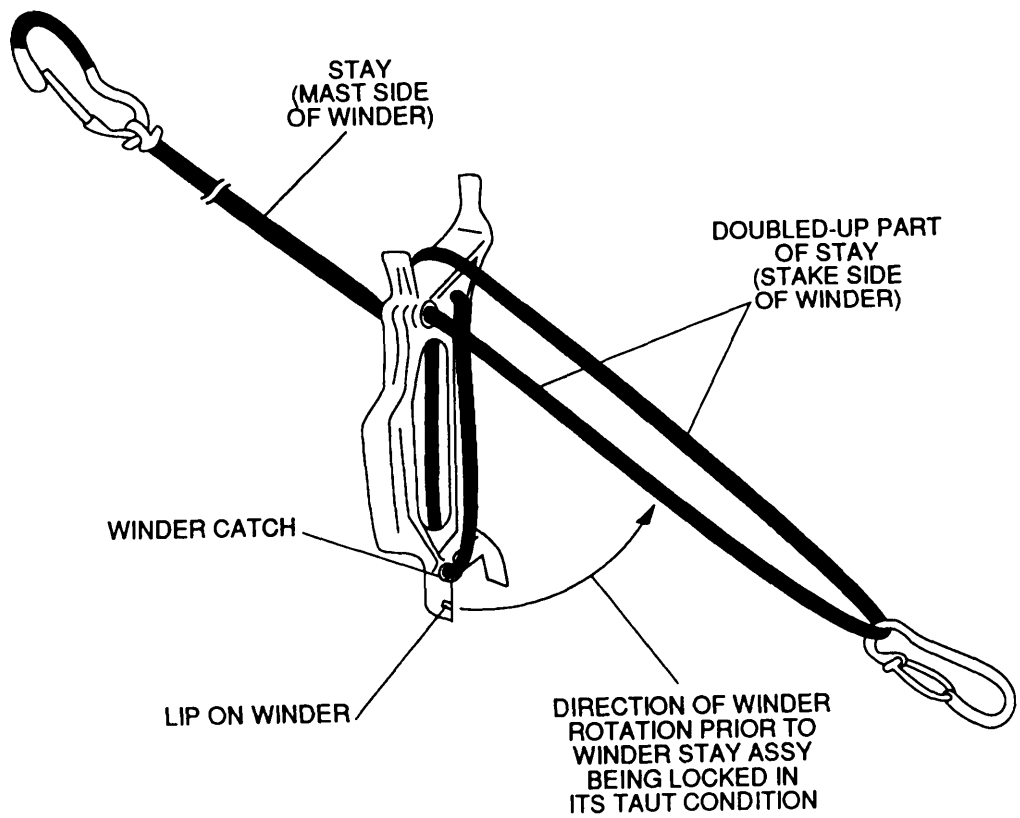

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Figure 2-21. Winder With One Complete Wrap of Excess Stay

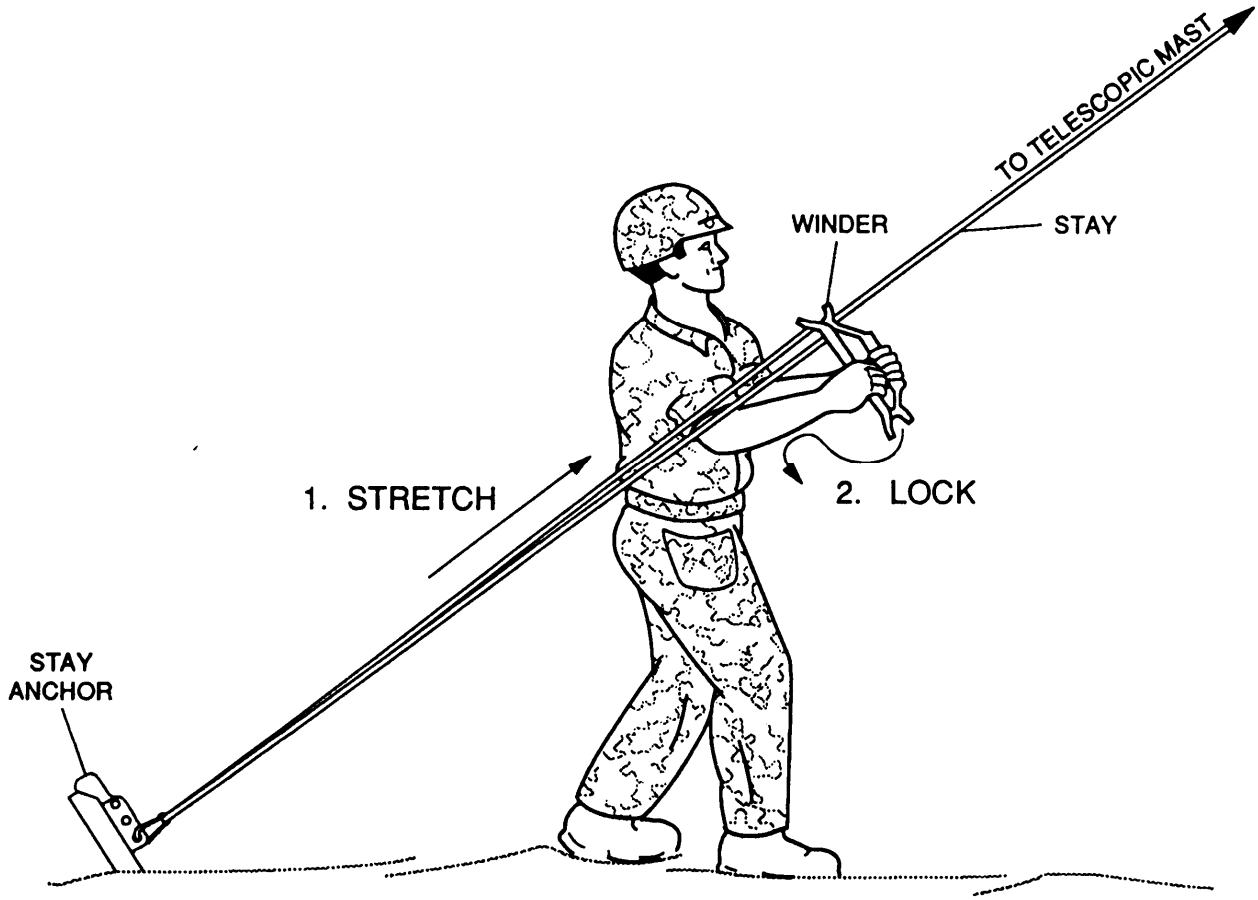

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Figure 2-22. Stretching and Locking a Winder Stay Assembly

2-11.3.2 Loosening a Winder Stay Assembly. Proceed as follows to loosen a stretched and locked winder stay assembly and detach it from a stay anchor:

a. Unlock doubled-up part of stay from winder catch and associated lip on winder (fig. 2-22).

b. Rotate winder down from its stretched and locked position until it is perpendicular to stay (fig. 2-19).

c. Slide winder toward stay anchor along that part of stay passing through winder locking hole, until sufficient slack is obtained to disconnect safety hook from stay anchor.

2-11.3.3 Creating Slack in a Winder Stay Assembly. During extension of the telescopic mast (para 2-11.2), control over the upper part of the mast is achieved by periodically creating approximately one foot of slack in the four blue-coded winder stay assemblies. Proceed as follows:

a. Unhook doubled-up part of stay from winder catch and associated lip on winder (fig. 2-21).

b. Rotate winder down from its stretched and locked position until it is perpendicular to stay (fig. 2-19).

c. Slide winder toward stay anchor along that part of stay passing through winder locking hole, until suitable slack has been created.

d. When required amount of slack has been created, lock winder stay assembly as follows:

(1) Rotate winder up and toward stay anchor (fig. 2-22) until it is parallel to stay.

WARNING

Both sections in doubled-up part of stay must be placed completely under winder catch and over associated lip (fig. 2-21) on winder. Otherwise, winder stay assembly does not fully lock and a hazardous condition exists.

(2) Hook doubled-up part of stay that is adjacent to winder under winder catch (fig. 2-21).

2-11.3.4 Taking Up Slack in a Winder Stay Assembly . During lowering of the telescopic mast (para 2-12), control over the upper part of the mast is achieved by periodically taking up slack in the four blue-coded winder stay assemblies. Proceed as follows:

a. Unhook doubled-up part of stay from winder catch and associated lip on winder (fig. 2-21).

b. Rotate winder down from its stretched and locked position until it is perpendicular to stay (fig. 2-19).

c. Slide guy winder toward telescopic mast along that part of stay passing through winder locking hole, until slack in winder stay assembly has been almost taken up. There is no need to create a taut winder stay assembly.

d. When required amount of slack has been taken up, lock winder stay assembly as follows:

(1) Rotate winder up and toward stay anchor (fig. 2-22) until it is parallel to stay.

WARNING

Both sections in doubled-up part of stay must be placed completely under winder catch and over associated lip (fig. 2-21) on winder. Otherwise, winder stay assembly does not fully lock and a hazardous condition exists.

(2) Hook doubled-up part of stay that is adjacent to winder under winder catch (figI. 2-21).

2-11.3.5 Repositioning a Winder on a Stay. To reposition the winder on a stay, proceed as follows:

a. Unhook doubled-up part of stay from winder catch and lip on winder (fig. 2-21).

b. Rotate winder down from its locked position until it is perpendicular to stay (fig. 2-19).

c. Unwrap stay from stay retainers on winder (fig. 2-20) to provide sufficient slack for repositioning winder.

d. Slide winder either toward or away from stay anchor along that part of stay passing through winder locking hole, until desired winder position is obtained.

e. Lock winder as follows:

(1) Rotate winder up and toward stay anchor (fig. 2-22) until it is parallel to stay.

WARNING

Both sections in doubled-up part of stay must be placed completely under winder catch and over lip (fig. 2-21) on winder. Otherwise, winder stay assembly does not fully lock and a hazardous condition exists.

(2) Hook doubled-up part of stay that is adjacent to winder under winder catch (fig. 2-21).

2-11.3.6 Storing a Winder Stay Assembly. Proceed as follows to store a winder stay assembly following disassembly of a 15-meter mast:

a. Wrap doubled-up part of stay around stay retainers (fig. 2-19).

b. Wrap remainder of stay around stay retainers, leaving about 18 inches of stay free.

c. Wrap this free end (with attached color-coded safety hook) around main wrapping of stay, at right angles to main wrapping. Do not wrap free end around handle of winder.

d. Store winder stay assembly in accessory bag.

Section IV. PREPARATION FOR MOVEMENT

2-12 EQUIPMENT SHUTDOWN.

Equipment shutdown consists of disassembling the installed 15-meter mast (and associated radio antenna and rf antenna cable) so it can be packed into the transporting vehicle for movement (para 2-13).

Do not start the mast disassembly procedure until the radio set has been shut down and the rf antenna cable has been disconnected from the radio set. Refer to radio's technical manual for specific instructions.

WARNING

To avoid injury or death, observe the following during disassembly procedures:

- Do not attempt to disassemble telescopic mast during an electrical storm.
- Two people are required to lower or carry telescopic mast.
- Wear safety goggles, work gloves, and helmet, as appropriate, during disassembly of telescopic mast.

a. Position reel ford antenna cable so that, as telescopic mast is lowered, rf antenna cable can be conveniently wound onto its reel.

b. Lower telescopic mast to its fully retracted vertical position (fig. 1-2) as follows:

WARNING

Do not retract mast if wind velocity is 33 miles per hour (15 meters per second or greater). Mast could topple and cause serious injury or death to personnel.

To avoid injury to personnel or damage to equipment during lowering of telescopic mast, refer to paragraph 2-11.3.4.

Do not loosen any winder stay assemblies until instructed to do so. Mast subassembly can topple over and cause injury to personnel and damage to equipment.

To avoid personnel injury and damage to equipment, mast disassembly team must relieve preload tension on upper mast sections before winch safety catch is pressed in toward telescopic mast so mast can be lowered.

CAUTION

Failure to relieve preload tension on guy wires before lowering mast may result in mast failure.

(1) Mast disassembly team relieves preload tension on top mast section by slightly loosening four upper (red-coded) and four lower (blue-coded) winder stay assemblies secured to plates (fig. 2-14). Refer to paragraph 2-11.3.3 for proper procedure to loosen winder. Do not allow winder stay assemblies to become slack.

(2) One person operates winch as follows:

WARNING

To avoid injury to personnel and damage to equipment, do not use substitute for winch shear pin. Use authorized part only.

CAUTION

To minimize wear on winder stay assemblies, avoid stepping on them.

(a) Grasp winch handle firmly with right hand to maintain complete control of lowering process.

(b) Turn brake control knob slightly with left hand to release friction brake.

(c) Use winch handle to extend mast just enough to allow safety catch to be moved easily.

(d) Press safety catch in toward mast with left hand so telescopic mast can be lowered by means of winch handle.

(e) Lower mast using winch, maintaining at all times a firm grip on winch handle.

NOTE

Releasing pressure of left hand on safety catch prevents further lowering of telescopic mast.

(f) Periodically pause to adjust brake control knob with left hand as required to provide safe, controlled lowering of telescopic mast.

(3) At the same time, the other person assists as follows:

(a) Take up slack in blue-coded winder stay assemblies as required for safe lowering of telescopic mast (para 2-11.3.4).

(b) Take up slack in rf antenna cable as required. Do not allow the cable to become twisted or kinked.

(c) Observe the lowering process to ensure it is proceeding safely.

c. After telescopic mast has been lowered to its fully retracted vertical position, proceed as follows:

(1) Disconnect four red-coded winder stay assemblies from stay anchors. Leave foremost winder stay assemblies (red-coded winder stay assemblies located along raising direction, fig. 2-18) on ground. Wind other three red-coded stays on their winders to base of telescopic mast. Leave them neatly on ground with their color-coded safety hooks still attached to upper plate (fig. 2-14).

(2) Disconnect four blue-coded stays from stay anchors and wind them on their winders to base of telescopic mast. Leave them neatly on ground with their color-coded safety hooks still attached to lower winder stay assembly plate.

(3) Use sledge hammer as required for removing yellow stake that was driven into ground through hole in end of turning lever to fix orientation of telescopic mast. Store yellow stake in accessory bag.

CAUTION

With two persons holding mast vertical, add one foot of slack to black side stays. If during the process of laying mast down more than slight tension is developed, bring mast back to vertical and add an additional amount of slack as required. Failure to add slack during this procedure can damage stays and winders.

(4) Mast must be lowered to the ground in the direction directly opposite the raising direction of the mast (fig. 2-6). That is, it must be toward the pair of stay anchors located on same side of base plate as base plate chains.

(5) Use turning lever to rotate telescopic mast so mounted radio antenna is facing raising direction. Antenna faces upward after telescopic mast has been laid over onto ground.

(6) Remove turning lever from base of mast. Then insert it through side holes on base of mast and through tail ends of base plate chains (fig. 2-7). Ensure tail ends of base plate chains are outside the side holes on mast base.

d. While one person holds telescopic mast in its vertical position, other person:

(1) Disconnects black-coded forward winder stay assembly (fig. 2-17) from stay anchor.

(2) Winds this forward stay on its winder to base of telescopic mast and leaves it neatly on ground with its color-coded safety hook still attached to winder stay assembly ring (fig. 2-14).

(3) Picks up foremost winder stay assembly (red-coded winder stay assembly still located along raising direction) and assumes pulling position (fig. 2-18).

e. Person holding foremost winder stay assembly uses it as the primary control in lowering telescopic mast to ground. Other person assists as follows:

(1) Hold onto telescopic mast.

(2) Place accessory bag under upper end of mast section 1 (fig. 2-13) before telescopic mast is on the ground.

f. After telescopic mast is on the ground, proceed as follows:

(1) Remove radio antenna and any associated equipment (such as rf antenna cable and cable retention device). Refer to technical manual of shelter using this radio/antenna configuration.

(2) Stow rf antenna cable safely out of the way.

(3) Disconnect all four red-coded stays from upper plate (fig. 2-14) and wind them on their winders. Set winder stay assembly aside for storage in accessory bag.

(4) Disconnect all four blue-coded stays from lower plate and wind them on their winders. Set winder stay assemblies aside for storage in accessory bag.

(5) Disconnect all four black-coded stays from ring and stay anchors and wind them on their winders. Set winder stay assemblies aside for storage in accessory bag.

(6) Remove two extension tubes from top of telescopic mast as follows (fig. 2-13):

(a) Loosen attachment knobs of 40-millimeter OD extension tube and remove tube from top of 50-millimeter OD extension tube. Set extension tube aside for storage in accessory bag.

(b) Loosen attachment knobs of 50-millimeter OD extension tube and remove tube from mounting post on top of mast section 6. Set extension tube aside for storage in accessory bag.

(7) Remove accessory bag from under upper end of mast section 1 and stow 12 guys and 2 extension tubes.

(8) Remove tail end of winch rope from slot of cable recess located on flange of winch cable drum (fig. 2-12). To do this, push winch safety catch toward mast and pull on winch rope to unwind it from cable drum and leave cable recess fully exposed.

(9) Store tail end of winch rope as follows (fig. 2-10):

(a) Pull on winch rope to obtain about 1-1/2 feet of slack.

(b) Secure tail end of winch rope in cable sleeve located directly above handle on mast section 1.

(10) Remove winch from mast section 1 and store it as follows (figs. 2-10 and 2-12):

(a) Press quick-lock latch at top of winch.

(b) While latch is depressed, slide winch down and away from two cap-head bolts located on winch bracket.

CAUTION

To prevent damage to winders, do not store winch on top of winder stay assemblies in storage bag.

(c) Store winch in accessory bag.

(11) Lock six mast sections together as follows (figs. 2-10 and 2-11):

WARNING

To avoid injury, keep hands off upper guy plate as mast sections are pushed together.

(a) With one person holding handle (fig. 2-10) at bottom of telescopic mast, other person grasps mounting post at top of telescopic mast and carefully pushes the six mast sections together until telescopic mast is fully retracted (fig. 1-2).

(b) With mast-lock control lever in its up (unlocked) position, pass top end of mast-lock wire cable through adjacent opening in ring and hook it onto plate at top of mast assembly section 6.

(c) Pull down on mast-lock control lever to place it in its locked position.

(12) Remove masthead cap (fig. 2-8) from accessory bag and install it on top of telescopic mast. Secure it with terylene rope and quick-lock device.

(13) Remove turning lever from side holes on base of mast and tail ends of base plate chains (fig. 2-7). Store turning lever in accessory bag.

(14) Lift telescopic mast off base plate.

(15) Use sledge hammer as required to remove the two guy stakes from base plate. Store ground spikes and base plate in accessory bag.

(16) Use sledge hammer as required to remove all stay anchors. Store stay anchors in accessory bag.

2-13 EQUIPMENT PACKUP.

Following disassembly of the 15-meter mast, pack it onto the transporting vehicle. No special packing material is required for these items before they are loaded onto the transporting vehicle.

CAUTION

Handle telescopic mast with care to avoid damage to equipment.

Check that tool and equipment used for installation and disassembly (table 2-2) are cleaned and then stored in the appropriate transporting vehicle for movement.

CHAPTER 3

OPERATING INSTRUCTIONS

Section I. CONTROLS AND INDICATORS

3-1 DAMAGE FROM IMPROPER SETTINGS.

If use of the turning lever (para 3-3) rotates the telescopic mast too far in one direction, the rf antenna cable will wrap around the extension tube at the top of the telescopic mast. As a result, undue strain on and possible damage to the mast, the rf antenna cable, and/or the antenna could occur.

3-2 OPERATOR CONTROLS.

The only operator control for the 15-meter mast is the antenna orientation control listed and described in table 3-1. There are no indicators associated with the 15-meter mast.

Table 3-1. Antenna Orientation Control

CONTROL	FUNCTION
Turning lever	Provides means of aiming antenna

Section II. OPERATING UNDER USUAL CONDITIONS

NOTE

For detailed instructions on aiming radio antenna, refer to technical manual of radio set being used.

Use the turning lever to rotate the telescopic mast and the mounted antenna as follows:

a. Insert turning lever in two side holes (fig. 2-7) on bottom of telescopic mast.

b. Use turning lever to gently rotate telescopic mast to desired aiming direction.

c. Fix direction of antenna by using a sledge hammer to drive yellow stake through hole in end of turning lever and into the ground.

Section III. OPERATING UNDER UNUSUAL CONDITIONS

When properly erected, the 15-meter mast can operate within the environmental limits listed in table 1-2.

WARNING

Stay anchors should always be inspected periodically and driven down further if necessary. This inspection must be performed more frequently during strong winds or a rainstorm, which can soften the ground. Under these conditions, strain on stay anchors can be reduced by moving them outward as required (one at a time and preferably in advance of adverse conditions noted), up to distances permitted by full lengths of winder stay assemblies.

If the antenna rotates away from its aiming direction, refer to Section II.

CHAPTER 4

OPERATOR MAINTENANCE INSTRUCTIONS

Section I. TOOLS AND EQUIPMENT

4-1 TOOLS AND EQUIPMENT.

No tools or test equipment are authorized for use by the operator.

4-2 REPAIR PARTS.

No repair parts are authorized for operator maintenance.

Section II. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

4-3 GENERAL.

NOTE

When performing PMCS or routine checks, observe all WARNINGS and CAUTIONS listed at the beginning of this manual, at the appropriate place in the procedures, or on plates and decals attached on the equipment.

Operator preventive maintenance is the systematic care, servicing, and inspection of equipment to prevent the occurrence of trouble, to reduce downtime, and to maintain equipment in serviceable condition. To be sure that the equipment is always ready for a mission, do the scheduled PMCS.

4-4 PMCS PROCEDURES.

4-4.1 Routing Checks. Routine checks such as cleaning, dusting, washing, checking for loose and chipped paint, storing items not in use, checking for completeness, and checking for loose nuts, bolts, and screws are not listed as PMCS. They are tasks that should be done anytime they are needed.

4-4.2 Continuous Operation. If the 15-meter mast is kept in continuous operation, check and service those items that can be checked and serviced without disturbing operation. Make the complete checks and services when the 15-meter mast is disassembled.

4-4.3 Defects. Deficiencies that cannot be corrected must be reported to higher maintenance personnel. Records and reports of preventive maintenance must be made in accordance with procedures given in DA Pam 738-750.

4-4.4 Scheduling.. PMCS must be done at the specified times if possible. If operational requirements prevent doing PMCS at the specified time, make the required checks and services at the first opportunity. During operation, PMCS must be done regularly to help identify small problems before they become big problems. In addition, the specified checks, and services must be performed under the following special conditions.

4-4.4.1 Before Use of Mast. Always keep in mind the CAUTIONS and WARNINGS. Perform the Before (B) PMCS.

4-4.4.2 During Use of Mast. Always keep in mind the CAUTIONS and WARNINGS. Perform the During (D) PMCS.

4-4.4.3 After Use of Mast. Always keep in mind the CAUTIONS and WARNINGS. Perform the After (A) PMCS.

4-4.5 PMCS Table. Table 4-1 contains the PMCS procedures. It indicates what items to check, when to check them, and how to check them. Perform the PMCS procedures thoroughly and always observe WARNINGS and CAUTIONS.

4-4.5.1 ITEM NO. Column. The checks and services are listed in the order that they should be accomplished. Use the item number for the TM number on DA Form 2404, Equipment Inspection and Maintenance Worksheet, to record results of checks and services.

4-4.5.2 INTERVAL Columns. The columns headed B, D, and A contain a mark in the appropriate column. This indicates when to perform the PMCS procedure.

4-4.5.3 ITEM TO BE INSPECTED Column. The items listed in this column indicate what part of the equipment is to be checked.

4-4.5.4 PROCEDURES. Column. This column indicates how to perform the check on the item listed in the ITEM TO BE INSPECTED column.

4-4.5.5 EQUIPMENT WILL BE REPORTED NOT READY/AVAILABLE IF: Column. This column contains criteria that will cause the 15-meter mast to be classified as not ready because of its inability to perform its primary mission. This column will be left blank if the condition of the item to be inspected will not cause the 15-meter mast to be unusable.

NOTE

Checks in INTERVAL columns are to be performed in the order listed.

Table 4-1. Operator Preventive Maintenance Checks and Sevices

B = Before use D = During use A = After use

ITEM NO.	INTERVAL B	INTERVAL D	INTERVAL A	ITEM TO BE INSPECTED	PROCEDURES	EQUIPMENT WILL BE REPORTED NOT READY /AVAILABLE IF:
				WARNING During bad weather, high wind, or icy conditions, inspect guy stakes, guys, ane telescopic mast frequently		
1	•	•		Telescopic mast	Check telescopic mast for straightness (para 2-11.2). If mast is bowed or leaning in any direction, adjust appropriate winder stay assemblies and check that they are taut	
2	•	•	•	Winder stay assemblies	Check winder stay assemblies for wear. If any winder stay assembly shows of serious wear, replace it.	Winder stay assembly broken or shows signs of serious wear

Table 4-1. Operator Preventive Maintenance Checks and Services – Continued

B = Before use D = During use A = After use

ITEM NO.	INTERVAL B	D	A	ITEM TO BE INSPECTED	PROCEDURES	EQUIPMENT WILL BE REPORTED NOT READY /AVAILABLE IF:
3		•		Stay anchors	a. Check security of stay anchors in ground, especially after heavy or prolonged rain. If a stay anchor is loose, refer to Chapter 3, section Ill	
			•		b. Check condition of stay anchors. If any stay anchor is bent or otherwise seriously damaged, replace it	
					WARNING Replacement of a hoisting rope must be made, at the latest, whenever any individual wire in a strand of the rope is found to be broken. Failure to heed warning could result in injury to personnel.	
4	•	•	•	Hoisting rope	Check condition of each hoisting rope (including the winch rope). Replace rope if it has a broken wire or has any other sign of serious wear	A hoisting rope shows a sign of serious wear
5	•			Winder stay safety hook	Check winder stay safety hook for proper functioning. Check that locking spring is not stuck in open position. Apply a few drops of engine lubricating oil to locking spring. Verify that locking spring returns to fully closed position	

CHAPTER 5

UNIT MAINTENANCE INSTRUCTIONS

Section I. REPAIR PARTS, SPECIAL TOOLS, AND SUPPORT EQUIPMENT

5-1 COMMON TOOLS AND EQUIPMENT.

Common tools and test equipment authorized for use by unit maintenance are listed in Maintenance Allocation Chart (MAC), Appendix B.

5-2 SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT.

Special tools; Test, Measurement and Diagnostic Equipment (TMDE); and support equipment authorized for use by unit maintenance are listed in the Repair Parts and Special Tools Lists (RPSTL), Appendix F.

5-3 REPAIR PARTS.

Repair parts and accessories authorized for use by unit maintenance are listed in the Repair Parts and Special Tools Lists (RPSTL), Appendix F.

Section II. REPAINTING AND REFINISHING INSTRUCTIONS

CAUTION

Before painting, carefully mask all unpainted surfaces, nameplates, decals, MWO information, and other markings.

5-4 PAINTS AND FINISHES.

The only type of paints or finishes authorized for use on the 15-meter mast are those listed in TB 43-0118, Field Instructions for Painting and Preserving Electronics Command Equipment.

5-5 PAINTING INSTRUCTIONS.

Refer to TB 43-0118, Field Instructions for Painting and Preserving Communications-Electronics Equipment, for instructions about painting. For touch-up painting, remove rust and corrosion from metal surfaces by lightly sanding them with fine sandpaper. Brush two thin coats of paint on bare metal. Instructions for painting with Chemical Agent Reflective Coating (CARC) is covered in TB-43-0118, Field Instructions for Painting and Preserving Communications-Electronics Equipment.

5-6 CAMOUFLAGE PAINTING.

Communications-electronic equipment systems requiring camouflage pattern painting and operating under controlled environmental conditions (air conditioned) shall be painted in accordance with the patterns prescribed in TB 43-0118.

Section III. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

5-7 GENERAL.

NOTE

When performing PMCS or routine checks, observe all WARNINGS and CAUTIONS listed at the beginning of this manual, at the appropriate place in the procedures, or on plates and decals attached on the equipment.

Preventive maintenance is the systematic care, servicing, and inspection of equipment to prevent the occurrence of trouble, to reduce down time, and to maintain equipment in serviceable condition. To be sure that your equipment is always ready for a mission, do the scheduled PMCS.

5-8 PMCS PROCEDURES.

5-8.1 Routine Checks. Routine checks such as cleaning, dusting, washing, checking for loose and chipped paint, storing items not in use, covering unused receptacles, checking for completeness, and checking for loose nuts, bolts, and screws are not listed as PMCS. These are tasks that should be done any time they are needed.

5-8.2 Continuous Operation. If the 15-meter mast must be kept in continuous operation, check and service only those items that can be checked and serviced without disturbing operation. Make the complete checks and services when the 15-meter mast is disassembled.

5-8.3 Defects. Deficiencies that cannot be corrected must be reported to higher category maintenance personnel. Records and reports of preventive maintenance must be made in accordance with procedures given in DA Pam 738-750.

5-8.4 Scheduling. PMCS must be done at the specified times if possible. If operational requirements prevent doing a PMCS at the specified time, make the required checks and services at the first opportunity. During operation, PMCS must be done regularly to help spot small troubles before they become big problems.

5-8.5 PMCS Table. Table 5-1 contains the PMCS procedures. It indicates what items to check, when to check them, and how to check them. Perform the PMCS procedures thoroughly and always keep in mind the WARNINGS and CAUTIONS.

5-8.5.1 ITEM NO. Column The checks and services are listed in the order that you should do them. Use this number for the TM number on DA Form 2404, Equipment Inspection and Maintenance Worksheet, to record results of checks and services.

5-8.5.2 INTERVAL Column. The column headed S contains a mark. This indicates when to perform the PMCS procedure.

5-8.5.3 ITEM TO BE INSPECTED Column. The items listed in this column indicate what part of the equipment is to be checked.

5-8.5.4 PROCEDURES Column. This column indicates how to perform the checks on the items listed in the ITEM TO BE INSPECTED column.

NOTE

The checks in the INTERVAL column are to be performed in the order listed.

Table 5-1. Unit Preventive Maintenance Checks and Services

S = Semiannually

ITEM NO.	INTERVAL S	ITEM TO BE INSPECTED	PROCEDURES
1	•	Hoisting rope	Check full length of each hoisting rope for broken wire in any of the strands or any other signs of serious wear. Refer to paragraphs 5-14 through 5-17 for removal and replacement procedures
2	•	Mast assembly	Check sections for cracked or missing plastic guides and worn pulleys, shafts, and washers. Refer to paragraphs 5-18 through 5-23 for removal, replacement, and lubrication procedures

Section IV. TROUBLESHOOTING PROCEDURES

5-9. GENERAL.

Troubleshooting information included in table 5-2 is based on faults that may be encountered during operation and maintenance of the 15-Meter mast. Table 5-2 lists likely faults, probable causes of the faults, and corrective action required to remedy the faults.

Table 5-2. Troubleshooting

FAULT	PROBABLE CAUSE	CORRECTIVE ACTION
1. Mast sections do not extend into or retract out of each other smoothly	Plastic guides on mast sections are damaged or need to be lubed, or pulleys, washers, or shafts on mast sections are damaged	Disassemble telescopic mast and lubricate plastic guides on mast sections, or replace mast sections as required. Refer to para 5-18 through 5-23
2. In preparation for lowering mast, after tension on top mast section has been relieved by loosening winder stay assemblies, crank handle turns freely when attempting to extend mast before releasing safety catch	Broken winch shear pin	Replace winch shear pin. Refer to removal and replacement procedure, para 5-13
3. Top part of upper mast broken off near area of red safety hooks during assembly of mast on ground	Excessive stress on mast section due to improper support of mast during assembly or too much torque applied	Replace mast assembly section 6, para 5-23

Table 5-2. Troubleshooting - Continued

FAULT	PROBABLE CAUSE	CORRECTIVE ACTION
4. Undesirable azimuth movement of top mounted antenna.	Screw stripped or weld loose on attachment knobs on either 40- or 50-mm extension tube.	Inspect extension tubes and replace defective tube. Refer to appropriate steps in para 2-11.
5. Crack in winder stay assembly.	Metal fatigue or improper use of winder stay assembly.	Replace winder stay assembly, para 5-10.
6. One of mast sections 3 through 6 cannot be raised vertically when cranked.	Defective hoisting cable on lowest mast section that cannot be raised.	Replace defective hoisting cable, paras 5-14 through 5-17 as applicable.

Section V. UNIT MAINTENANCE

5-9 GENERAL.

This section contains unit maintenance procedures for components of the 15-meter mast.

5-10 WINDER STAY ASSEMBLY.

a. Removal.

(1) Disassemble 15-meter mast until retracted telescopic mast has been lowered onto accessory bag (para 2-12). Leave all winder stay assemblies attached to stay anchors except the three forward winder stay assemblies.

(2) Remove damaged winder stay assembly as follows:

(a) Detach color-coded safety hook (fig. 2-14) from upper plate, lower plate, or ring.

(b) Detach safety hook at other end of stay from stay anchor.

a. 1. Repair.

(1) Anchor or Mast Side Snaphook.

(a) Secure one replacement snaphook to anchor side end of stay as shown in figure 5-0.

(b) Secure mast side end of stay to mast side snaphook by a combination of running and overhand knots. Figure 5-0 shows how knots are formed.

(c) Slip the open mast side snaphook onto loop of running knot and tighten knot.

(d) Select and slip proper color shrink tubing on snaphook at the location shown in figure 5-0. Heat shrink tubing sleeve until sleeve fits tightly. Sleeve color (red, blue or black) is determined by stay position (fig. 2-14).

(2) Stay Winder.

(a) Remove stay from defective stay winder.

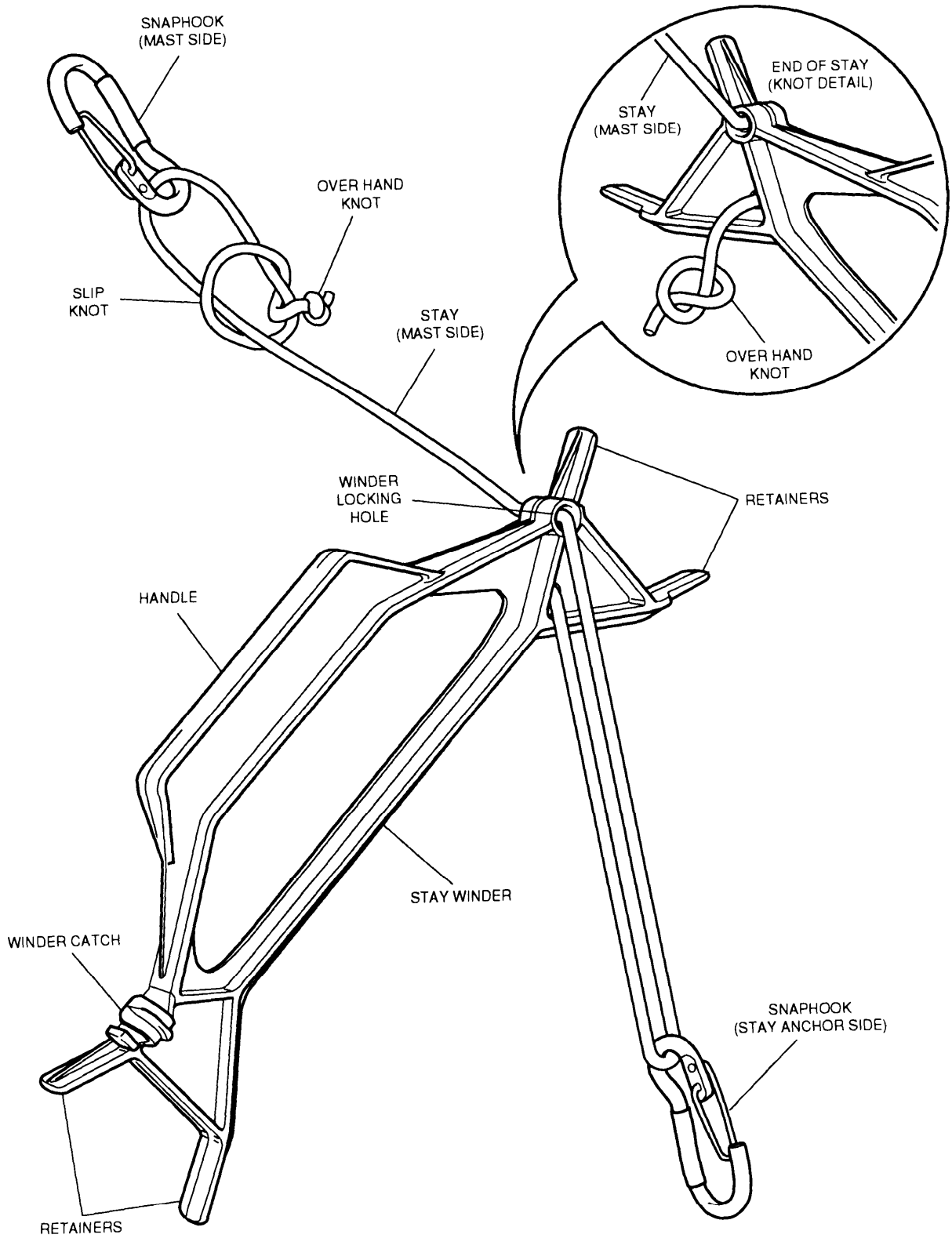

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Figure 5-0. Winder Stay Assembly

(b) Inspect removed stay for damage, fraying, or breaks. Replace as required.

(c) Route end of stay through new stay winder locking hole, then through anchor side snaphook, and finally, through tie hole, as shown in figure 5-0.

(d) Tie end of stay with an overhand knot as shown in figure 5-0.

(e) Install mast side snaphook, as described in paragraph a.1, step (1) above.

(3) Stay.

(a) Measure out and cut a length of stay material from bulk supply as follows:

Upper plate stay	- 66 feet (20 meters)
Lower plate stay	- 49 feet (15 meters)
Ring stay	- 33 feet (10 meters)

(b) Heat end of stays (on Kelvar material) to prevent end fraying.

(c) Examine stay winder and snaphooks for damage. If not damaged, use them on replacement stay. If stay winder and snaphooks are damaged, obtain new winder, snaphooks, and color shrink tubing from supply source.

(d) Install snaphook and stay winder, as described in steps a.1(1) and (2) above.

b. Replacement.

(1) Make length of replacement winder stay assembly equal to length of winder stay assembly being replaced.

(2) Attach replacement winder stay assembly as follows:

(a) Attach color-coded safety hook to upper plate, lower plate, or ring.

(b) Attach safety hook at other end of stay to the stay anchor, unless the replacement winder stay assembly is replacing one of the three forward winder stay assemblies. If the replacement winder stay assembly is for a forward winder stay assembly, stretch it out to its stay anchor but do not attach it at this time.

(3) Raise, extend, and secure the telescopic mast (para 2-11.2).

(4) Orient the antenna (Chapter 3).

5-11 WINCH.

a. Removal.

(1) Disassemble 15-meter mast until telescopic mast has been lowered to its fully retracted vertical position (para 2-12).

(2) Remove tail end of winch rope from slot of cable recess located on flange of winch cable drum and secure it in cable sleeve on mast section 1 (para 2-12).

(3) Remove winch from mast section 1 (para 2-12).

b. Replacement.

(1) Mount replacement winch on mast section 1 (para 2-11.1).

(2) Remove tail end of winch rope from cable sleeve on mast section 1 (para 2-11.1).

(3) Attach winch rope to winch cable drum and take up slack in winch cable (para 2-11.1).

(4) Raise, extend, and secure the telescopic mast (para 2-11.2).

5-12 WINCH ROPE.

a. Removal.

(1) Disassemble 15-meter mast to its fully retracted position (para 2-12).

WARNING

Telescopic mast is heavy. To avoid injury, two people are required for lifting and carrying it.

WARNING

To avoid injury to hands, wear work gloves, as applicable.

CAUTION

Handle telescopic mast with care to avoid damage to equipment.

(2) Using handle and ring on telescopic mast, move telescopic mast to a suitable work area for removing winch rope. Leave telescopic mast in a horizontal position with its handle facing upward. Telescopic mast can be rotated as required to perform subsequent steps.

(3) Unlock mast sections 1 through 6 (para 2-11.1).

(4) Release winch rope from stored position on mast section 1 (para 2-11.1).

(5) Pull on winch rope until mast is extended about 2 feet (about 0.6 meter).

(6) Rotate telescopic mast so shaft (2, fig. 5-1) is vertical. This prevents the washers (5) from falling into slit (7) during following steps.

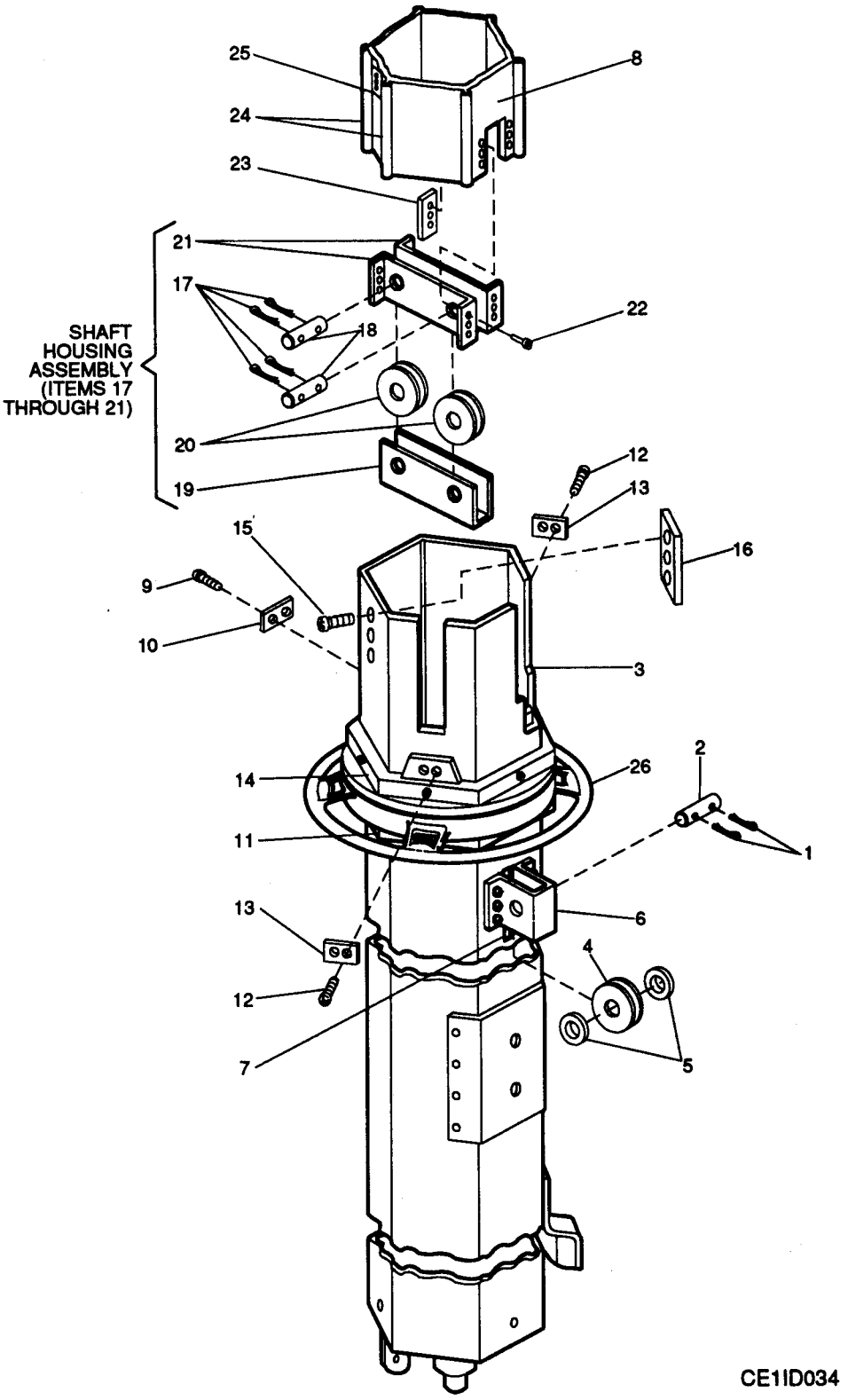

Figure 5-1. Winch Rope Replacement

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(7) Remove cotter pin (1) from shaft (2) on mast section 1 (3).

(8) Remove shaft (2), pulley (4), and washers (5) from pulley housing (6).

(9) Bend end of winch rope and feed this bent end through slit (7) and out the top of section 1 between sections 1 and 2.

(10) While another person supports (but does not pull on) upper end of telescopic mast to keep it off the ground, pull on protruding winch rope until telescopic mast is fully extended, as indicated by a completely visible white tape marking above top of mast section 1 (fig. 1-7).

(11) Remove screws (9, fig. 5-1) and cable clamp (10) from lower support ring (11).

(12) Remove two sets of screws (12) and cable clamps (13) from upper support ring (14).

(13) Remove ends of section 3 hoisting rope (fig. 5-2) from slots on upper support ring.

(14) Rotate telescopic mast until the three screws (15, fig. 5-1) that secure stop cleat (16) to mast section 1 are on top of mast section 1. Then remove these three screws and let stop cleat drop between sections 1 and 2 onto top of section 2.

(15) Separate sections 1 and 2 and remove stop cleat (16) from top of section 2.

(16) Remove ends of winch rope from section 1.

(17) Remove screws (22) and nut plates (23) that secure shaft housing assembly (17 through 21) to bottom of section 2 (two places). Remove shaft housing assembly.

(18) Remove cotter pin (17) from each shaft (18).

(19) Remove shafts (18), pulleys (20), pulley housing (19), and winch rope from the two pulley yokes (21).

b. Cleaning.

WARNING

USE OF CLEANING SOLVENT

Fumes of TRICHLOROTRIFLUOROETHANE are poisonous. Provide adequate ventilation whenever you use TRICHLOROTRIFLUORO-ETHANE. Do not use solvent near heat or open flame. TRICHLOROTRIFLUOROETHANE will not burn, but heat changes the gas into poisonous, irritating fumes. Do not breathe the fumes or vapors. TRICHLOROTRIFLUORO-ETHANE dissolves natural skin oils. Do not get the solvent on your skin. Use gloves, sleeves, and an apron that the solvent cannot penetrate. If the solvent is taken internally, see a doctor immediately.

Using a clean cloth and trichlorotrifluoroethane, clean grease from disassembled pulleys, washers, and shafts, and from pulley housings, plastic guides (24, fig. 5-1), and ring (26). Also, clean grease from the plastic guides of the other mast sections and from the upper and lower plates (fig. 1-2).

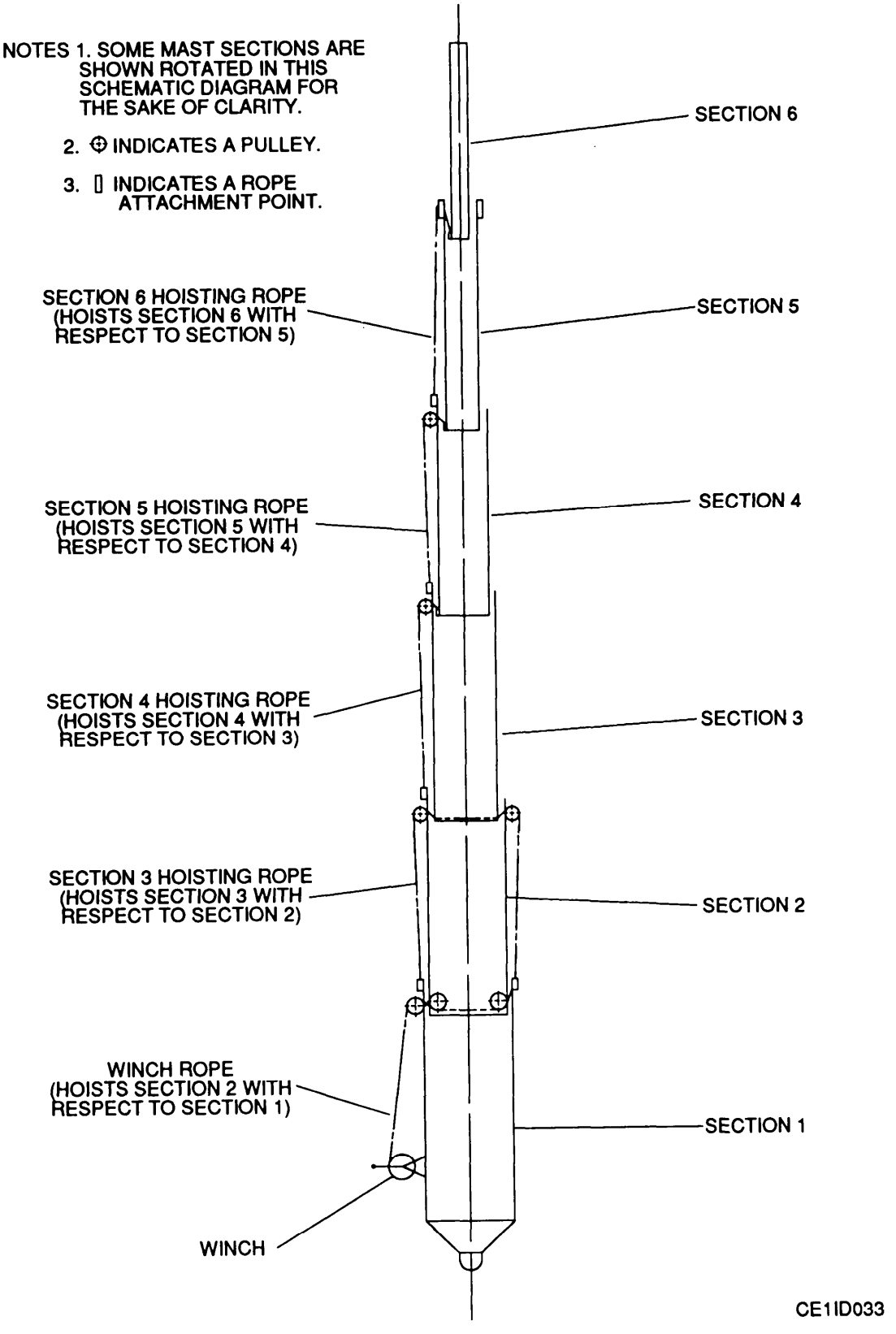


Figure 5-2. Mast Assembly Sections and Their Hoisting Ropes

c. Inspection.

(1) Inspect all plastic guides for wear, cracked, broken, or missing guides.

(2) Inspect disassembled pulleys, washers, and shafts for cracks and wear.

d. Lubrication.

(1) Apply a coat of silicone grease to disassembled shafts and pulleys.

(2) Apply a thin coat of silicone grease to all plastic guides. Wipe off excess grease with a clean cloth.

(3) Apply silicone grease to the special lubricating passages of the ring, the upper plate, and the lower plate (fig. 1-2).

e. Replacement.

(1) Position pulleys (20, fig. 5-1), shafts (18), pulley housing (19), and replacement winch rope inside the two pulley yokes (21), with winch rope at bottom of pulley housing.

(2) Secure shafts (18) with replacement cotter pins (17). Bend ends of each cotter pin back around shafts.

(3) Install shaft housing assembly in bottom of mast section 2 (8) by means of screws (22) and nut plates (23).

(4) Align mast section 1 (3) with mast section 2 so that holes for the three screws (15) line up with the stop cleat (25) that is screwed to mast section 2.

(5) Feed end of winch rope that is closest to slit (7) in mast section 1 into top of mast section 1 and out through slit (7).

(6) Feed other end of winch rope into top of mast section 1 and out through hole that is opposite slit (7), after looping rope down about 1 foot below hole.

(7) Being careful not to kink winch rope, slide section 2 into section 1 approximately 2 feet (about 0.6 meter) at alinement specified in step 4.

(8) Using needle-nose pliers, position stop cleat (16) between section 1 and section 2 as required and secure it there with screws (15).

(9) Position ends of section 3 hoisting rope in their respective slots on upper support ring (14) and secure them there with two sets of clamps (13) and screws (12).

(10) Secure one end of winch rope to lower support ring (11) with clamp (10) and screws (9).

(11) Make a loop at other end of winch rope just under pulley housing (6) after rotating telescopic mast so that shaft (2) is vertical following insertion.

(12) Install pulley (4) in loop.

(13) Place washer (5) on each side of pulley. Push loop with pulley and washers up into pulley housing. Using a screwdriver shaft, aline pulley and washers with holes in pulley housing.

(14) Install shaft (2) and replacement cotter pin (1). Bend ends of cotter pin back around shaft.

WARNING

To avoid injury, keep hands off upper plate as mast sections are pushed together.

(15) Push mast sections together by having one person pull on winch rope as required to prevent slack from developing in hoisting ropes, while another person pushes slowly and steadily on mounting post at top of telescopic mast.

(16) Store tail end of winch rope in cable sleeve on mast section 1 (para 2-12).

(17) Lock telescopic mast in its fully retracted condition (para 2-12).

(18) Move telescopic mast back to base plate and reinstall 15-meter mast (para 2-11).

5-13 WINCH SHEAR PIN.

a. Removal.

WARNING

When replacing broken shear pin while winch is secured to telescopic mast, following safety procedures must be observed to avoid injury to personnel and damage to equipment:

- Do not remove winch from telescopic mast
- Ensure brake control knob (6, fig. 5-3) is hand-tight
- Safety catch (5) must be engaged to prevent any movement of winch cable. Make sure safety catch is not pressed in toward telescopic mast.

(1) Remove 5/8” nut (3) and washer (2) securing winch handle (1) to assembly. Retain hardware.

(2) Check hole clearance in winch handle yoke (7) and shaft (8), and remove damaged pieces of existing shear pin (4), if any.

b. Replacement.

WARNING

To avoid injury to personnel and damage to equipment, do not use substitute for winch shear pin. Correct shear pin must be used for replacement.

(1) Start new pin in place in hole of handle assembly.

(2) Reassemble handle assembly (1) on shaft (8) and lineup holes. Tap shear pin (4) completely through handle and shaft. Verify that pin is flush with both handle surfaces.

(3) Replace and tighten 5/8” nut (3) and washer (2) to handle assembly (1).

(4) Check operation of ratchet and brake adjustment to verify repair.

5-14 MAST ASSEMBLY SECTION 3 HOISTING ROPE.

a. Removal.

(1) Disassemble 15-meter mast to its fully retracted position (para 2-12).

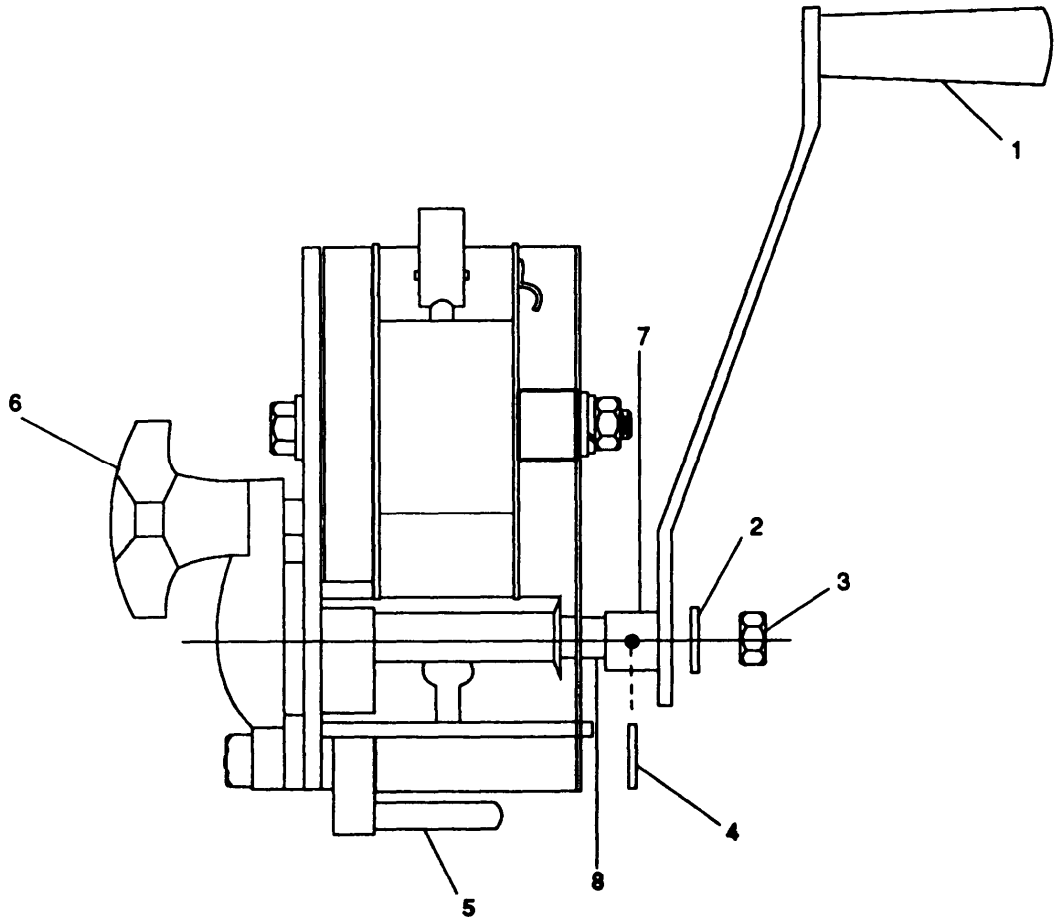


Figure 5-3. Winch Shear Pin Replacement

WARNING

Telescopic mast is heavy. To avoid injury, two people are required for lifting and carrying it.

WARNING

To avoid injury to hands, wear work gloves, as applicable.

CAUTION

Handle telescopic mast with care to avoid damage to equipment.

(2) Using handle and ring on telescopic mast, move telescopic mast to a suitable work area for removing section 3 hoisting cable. Leave telescopic mast in a horizontal position with its handle facing upward. Telescopic mast can be rotated as required to perform subsequent steps.

(3) Unlock mast sections 1 through 6 (para 2-11.1).

(4) Release rope cable from stored position on mast section 1 (para 2-11.1).

(5) While another person supports (but does not pull on) upper end of telescopic mast to keep it off ground, pull on winch rope until mast is fully extended (fig. 1-7).

(6) Remove two sets of screws (1, fig. 5-4) and cable clamps (2) from upper support ring (3) on section 1 (4).

(7) Remove cotter pin (5) from each of two shafts (6).

(8) Remove shafts, pulleys (7), and washers (8) from two pulley housings (9) on section 2 (10).

(9) Bend ends of section 3 hoisting cable and feed these bent ends through two slits (11) and out the top of section 2 between sections 2 and 3 (12).

(1 O) Remove screws (13) and cable clip (14).

(11) Separate section 3 from section 2 by pulling on protruding section 3 hoisting cable.

(12) Remove screw (15) and cover (16). Pull section 3 hoisting cable out of holes (17) in section 3

b. Cleaning.

WARNING

USE OF CLEANING SOLVENT

Fumes of TRICHLOROTRIFLUOROETHANE are poisonous. Provide adequate ventilation whenever you use TRICHLOROTRIFLUORO-ETHANE. Do not use solvent near heat or open flame. TRICHLOROTRIFLUOROETHANE will not burn, but heat changes the gas into poisonous, irritating fumes. Do not breathe the fumes or vapors. TRICHLOROTRIFLUORO-ETHANE dissolves natural skin oils. Do not get the solvent on your skin. Use gloves, sleeves, and an apron that the solvent cannot penetrate. If the solvent is taken internally, see a doctor immediately.

Using a clean cloth and trichlorotrifluoroethane, remove grease from disassembled pulleys, washers, and shafts, and from pulley housings and plastic guides (18, fig. 5-4). Also, remove grease from the plastic guides of the other mast sections and from the ring, the upper plate, and the lower plate (fig. 1-2).

c. Inspection.

(1) Inspect all plastic guides for wear, cracked, broken, or missing guides.

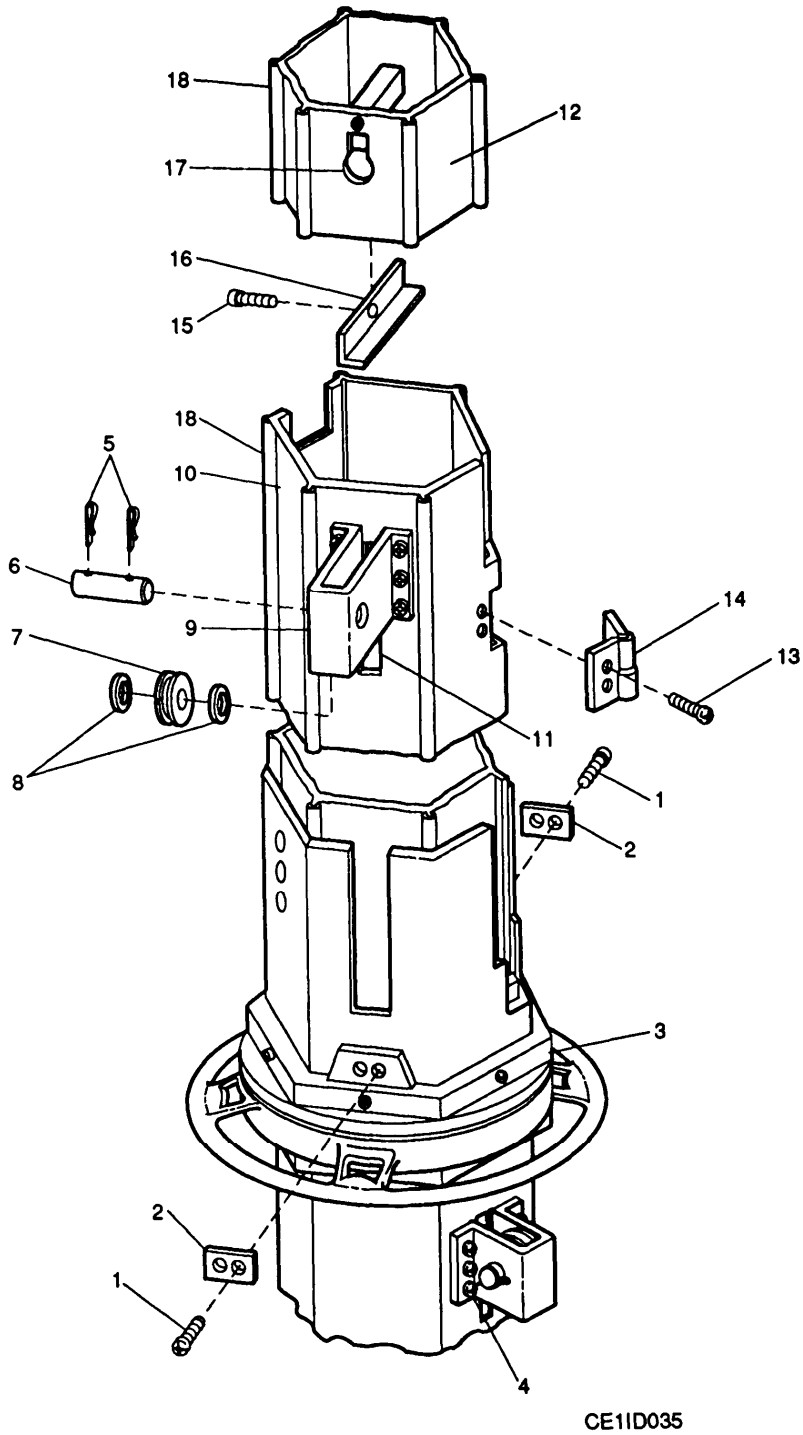


Figure 5-4. Mast Assembly Section 3 Hoisting Rope Replacement

(2) Inspect disassembled pulleys, washers, and shafts for cracks and wear.

d. Lubrication.

(1) Apply a coat of silicone grease to disassembled shafts and pulleys.

(2) Apply a thin coat of silicone grease to all plastic guides. Wipe off excess grease with a clean cloth.

(3) Apply silicone grease to the special lubricating passages of the ring, the upper plate, and the lower plate (fig. 1-2).

e. Replacement.

(1) Feed replacement section 3 hoisting rope through holes (17, fig. 5-4) in section 3 (12). Divide hoisting rope length equally on each side of section 3.

(2) Install cover (16) and secure it and hoisting rope with two screws (15).

(3) Align mast section 3 with mast section 2 (10) so pulley at the top of section 3 lines up with rope clip (14) at the top of section 2.

(4) Feed each end of section 3 hoisting rope into top of mast section 2 and out through the associated slit (11) and pulley housing (9).

(5) While one person maintains a moderately tight pull on each end of the section 3 hoisting rope, another person inserts section 3 into section 2 approximately 3 feet (about 0.9 meter)

(6) At one end of section 3 hoisting rope, make a loop just under pulley housing (9).

(7) Install pulley (7) in loop.

(8) Place washer (8) on each side of pulley. Push loop with pulley and washers up into pulley housing. Using a screwdriver shaft, aline pulley and washers with holes in pulley housing.

(9) Install shaft (6) and replacement cotter pin (5). Bend ends of cotter pin back around shaft.

(10) Secure end of hoisting rope to its slot in upper support ring (3) on section 1 (4) with clamp (2) and screws (1).

(11) Repeat steps (6) through (10) for other end of section 3 hoisting rope.

(12) Secure end of section 4 hoisting rope to top of section 2 with rope clip (14) and screws (13).

(13) Push mast sections together, store tail end of winch rope, lock telescopic mast in its fully retracted condition (para 2-12), move telescopic mast back to base plate, and reinstall 15-meter mast (para 2-11).

5-15 MAST ASSEMBLY SECTION 4 HOISTING ROPE.

a. Removal.

(1) Disassemble 15-meter mast to its fully retracted position (para 2-12).

WARNING

Telescopic mast is heavy. To avoid injury, two people are required for lifting and carrying it.

(2) Using handle and ring on telescopic mast, move telescopic mast to a suitable work area for removing section 4 hoisting rope. Leave telescopic mast in a horizontal position with its handle facing upward. Telescopic mast can be rotated as required to perform subsequent steps.

(3) Unlock mast sections 1 through 6 (para 2-11.1).

(4) Release winch rope from stored position on mast section 1 (para 2-11.1).

(5) While another person supports (but does not pull on) upper end of telescopic mast to keep it off ground, pull on winch rope until mast is fully extended (fig. 1-7).

(6) Remove screws (1, fig. 5-5) and cover (2) from section 3 (3).

(7) Remove screws (4) and cable clip (5) from section 2 (6).

(8) Remove cotter pin (7) from shaft (8).

(9) Remove shaft, pulley (9), and washers (10) from pulley housing (11).

(10) Bend end of section 4 hoisting rope and feed this bent end through slit (12) and upward between sections 3 and 4 (13). At bend in hoisting rope, press down on rope and pull it out the top of section 3 between sections 3 and 4.

(11) Remove upper set of screws (19) and cable clips (20) from top of section 3 (3).

(12) Separate section 4 from section 3 by pulling on protruding section 4 hoisting rope.

(13) Remove screws (14), nuts (18), and cable clip (15).

(14) Pull section 4 hoisting rope out of hole (16) in section 4.

b. Cleaning.

WARNING

USE OF CLEANING SOLVENT

Fumes of TRICHLOROTRIFLUOROETHANE are poisonous. Provide adequate ventilation whenever you use TRICHLOROTRIFLUORO-ETHANE. Do not use solvent near heat or open flame. TRICHLOROTRIFLUOROETHANE will not burn, but heat changes the gas into poisonous, irritating fumes. Do not breathe the fumes or vapors. TRICHLOROTRIFLUORO-ETHANE dissolves natural skin oils. Do not get the solvent on your skin. Use gloves, sleeves, and an apron that the solvent cannot penetrate. If the solvent is taken internally, see a doctor immediately.

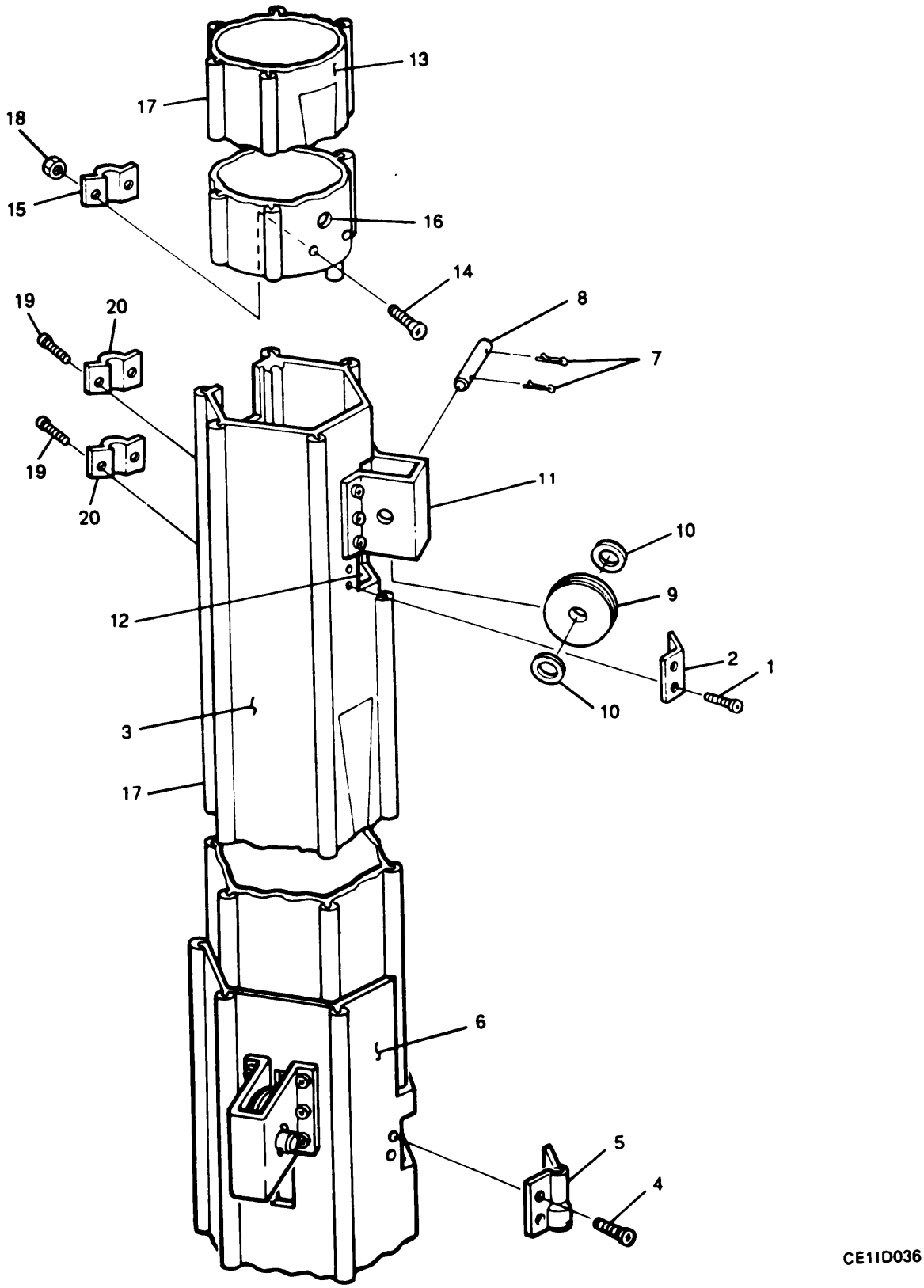


Figure 5-5. Mast Assembly Section 4 Hoisting Rope Replacement

Using a clean cloth and trichlorotrifluoroethane, clean grease from disassembled pulley, washers, and shaft, and from pulley housing and plastic guides (17). Also, clean grease from the plastic guides of the other mast sections and from the ring, the upper plate, and the lower plate (fig. 1-2).

c. Inspection.

(1) Inspect plastic guides for wear, cracked, broken, or missing guides.

(2) Inspect disassembled pulley, washers, and shaft for cracks and wear.

d. Lubrication.

(1) Apply a coat of silicone grease to disassembled washers, shaft, and pulley.

(2) Apply a thin coat of silicone grease to all plastic guides. Wipe off excess grease with a clean cloth.

(3) Apply silicone grease to the special lubricating passages of the ring, the upper plate, and the lower plate (fig. 1-2).

e. Replacement.

(1) Feed end of replacement section 4 hoisting rope through hole (16, fig. 5-5) in section 4 (13) and secure it with cable clip (15), screws (14), and nuts (18).

(2) Insert section 4 into section 3 (3) approximately 3 feet (about 0.9 meter), with end of hoisting rope alined with slit (12) in section 3.

(3) Pull hoisting rope out through slit in section 3.

(4) Make a loop in hoisting rope just below pulley housing (11).

(5) install pulley (9) in loop.

(6) Place washer (10) on each side of pulley. Push loop with pulley and washers up into pulley housing. Using a screwdriver shaft, aline pulley and washers with holes in pulley housing.

(7) Install shaft (8) and replacement cotter pin (7). Bend ends of cotter pin back around shaft.

(8) Install cover (2) and secure with screws (1).

(9) Position end of section 4 hoisting rope to section 2 (6) and secure with cable clip (5) and screws (4).

(lo) Position end of section 5 hoisting rope in slot at top of mast section 3 and secure it with the upper set of screws (19) and cable clips (20).

(11) Push mast sections together, store tail end of winch rope, lock telescopic mast in its fully retracted condition (para 2-12), move telescopic mast back to base plate, and reinstall 15-meter mast (para 2-11).

5-16 MAST ASSEMBLY SECTION 5 HOISTING ROPE.

a. Removal.

(1) Disassemble 15-meter mast to its fully retracted position (para 2-12).

WARNING

Telescopic mast is heavy. To avoid injury, two people are required for lifting and carrying it.

(2) Using handle and ring on telescopic mast, move telescopic mast to a suitable work area for removing section 5 hoisting rope. Leave telescopic mast in a horizontal position with its handle facing upward. Telescopic mast can be rotated as required to perform subsequent steps.

(3) Unlock mast sections 1 through 6 (para 2-11.1).

(4) Release winch rope from stored position on mast section 1 (para 2-11.1).

(5) While another person supports (but does not pull on) upper end of telescopic mast to keep it off ground, pull on winch rope until telescopic mast is fully extended (fig. 1-7).

(6) Remove upper set of screws (19, fig. 5-5) and cable clips (20) from top of section 3 (3).

(7) Remove cotter pin (3, fig. 5-6) from shaft (17).

(8) Remove shaft, pulley (16), and washers (8) from pulley housing (12) at top of mast section 4.

(9) Remove screws (9) and clamp (10) that secures end of section 6 hoisting rope to top of mast section 4.

(10) Pull mast section 5 (10, fig, 5-7) out of mast section 4 (1, fig. 5-6) to extent that rope-retaining hardware on section 5 hoisting rope and associated screw (6, fig. 5-7) are exposed in slot (11, fig. 5-6) below pulley housing (12) of mast section 5.

(11) Remove screw (6, fig. 5-7) from rope-retaining hardware on section 5 hoisting rope. This frees the section 5 hoisting rope from the bottom of mast section 5. Retain screw.

b. Cleaning.

WARNING

USE OF CLEANING SOLVENT

Fumes of TRICHLOROTRIFLUOROETHANE are poisonous, Provide adequate ventilation whenever you use TRICHLOROTRIFLUOROETHANE. Do not use solvent near heat or open flame. TRICHLOROTRIFLUOROETHANE wilt not burn, but heat changes the gas into poisonous, irritating fumes. Do not breathe the fumes or vapors. TRICHLOROTRIFLUOROETHANE dissolves natural skin oils. Do not get the solvent on your skin. Use gloves, sleeves, and an apron that the solvent cannot penetrate. If the solvent is taken internally, see a doctor immediately.

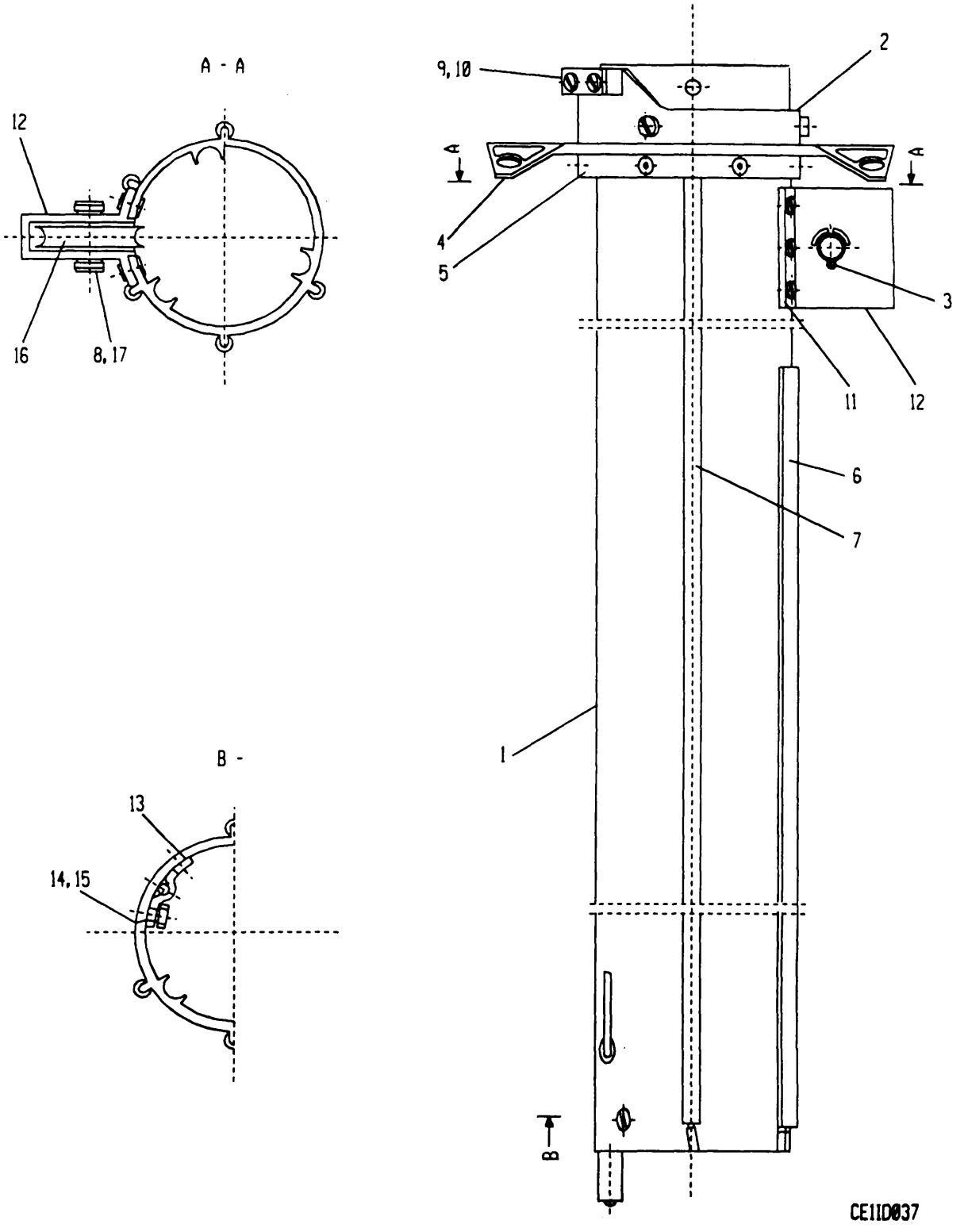


Figure 5-6. Mast Assembly Section 4

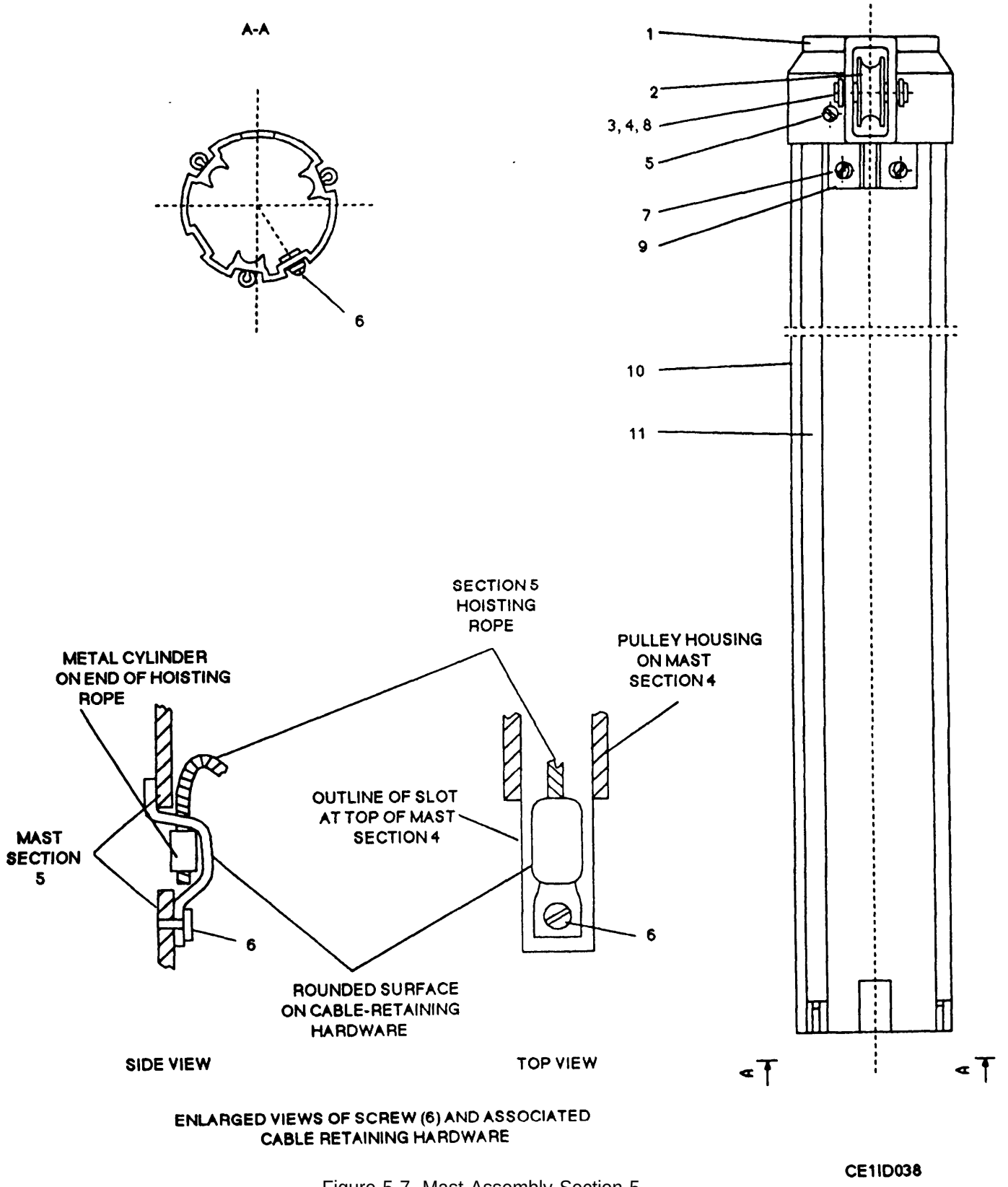


Figure 5-7. Mast Assembly Section 5

Using a clean cloth and trichlorotrifluoroethane, clean grease from disassembled pulley, washers, and shaft, and from pulley housing and plastic guides (6 and 7, fig. 5-6; 11, fig. 5-7). Also, clean grease from the plastic guides of the other mast sections and from the ring, the upper plate, and the lower plate (fig. 1-2).

c. Inspection.

(1) Inspect plastic guides for wear, cracked, broken, or missing guides.

(2) Inspect disassembled pulley, washers, and shaft for cracks and wear.

d. Lubrication.

(1) Apply a coat of silicone grease to disassembled shaft and pulley.

(2) Apply a thin coat of silicone grease to all plastic guides. Wipe off excess grease with a clean cloth.

(3) Apply silicone grease to the special lubricating passages of the ring, the upper plate, and the lower plate (fig. 1-2).

e. Replacement.

(1) Make sure that hole in bottom of mast section 5 for screw (6, fig. 5-7) is in position (fig. 5-6).

(2) Bend end of replacement section 5 hoisting rope and insert through slot (11, fig. 5-6) at top of mast section 4 so that the cable-retaining hardware seats into the slot at bottom of mast section 5 (fig. 5-7).

(3) Secure end of section 5 hoisting rope to bottom of mast section 5 with screw (6, fig. 5-7).

(4) Push section 5 into section 4 until narrow end of white position indicator on mast section 5 reaches top of mast section 4.

(5) Attach end of section 6 hoisting rope to top of mast section 4 with screws (9, fig. 5-6) and clamp (10).

(6) Make a loop in section 5 hoisting rope just below pulley housing (12).

(7) Install pulley (16) in loop.

(8) Place washer (8) on each side of pulley. Push loop with pulley and washers up into pulley housing. Using a screwdriver shaft, aline pulley and washers with holes in pulley housing.

(9) Install shaft (17) and replacement cotter pin (3). Bend ends of cotter pin back around shaft.

(10) Position end of section 5 hoisting rope in slot at top of mast section 3 (3, fig. 5-5) and secure it there with the upper set of screws (19) and cable clips (20).

(11) Push mast sections together, store tail end of winch rope, lock telescopic mast in its fully retracted condition (para 2-12), move telescopic mast back to base plate, and reinstall 15-meter mast (para 2-11).

5-17 MAST ASSEMBLY SECTION 6 HOISTING ROPE.

a. Removal.

(1) Disassemble 15-meter mast to its fully retracted position (para 2-12).

WARNING

Telescopic mast is heavy. To avoid injury, two people are required for lifting and carrying it.

(2) Using handle and ring on telescopic mast, move telescopic mast to a suitable work area for removing section 6 hoisting rope. Leave telescopic mast in a horizontal position with its handle facing upward. Telescopic mast can be rotated as required to perform subsequent steps.

WARNING

To avoid injury to hands, wear work gloves when handling mast-lock wire cable and winch rope in following steps.

(3) Unlock mast sections 1 through 6 (para 2-11.1).

(4) Release winch rope from stored position on mast section 1 (para 2-11.1).

(5) While another person supports (but does not pull on) upper end of telescopic mast to keep it off ground, pull on winch rope until telescopic mast is fully extended (fig. 1-7).

(6) Remove screws (9, fig. 5-6) and cable clamp (10) from top of section 4 (1).

(7) Remove cotter pin (4, fig. 5-7) from shaft (3).

(8) Remove shaft, pulley (2), and washers (8) from pulley housing (1).

(9) Remove screws (7) and mast stop clamp (9) from top of section 5.

(10) Remove screws (5) that secure pulley housing (1) to top of section 5.

(11) Slide pulley housing onto section 6 (6, fig. 5-8).

(12) Pull section 6 from section 5.

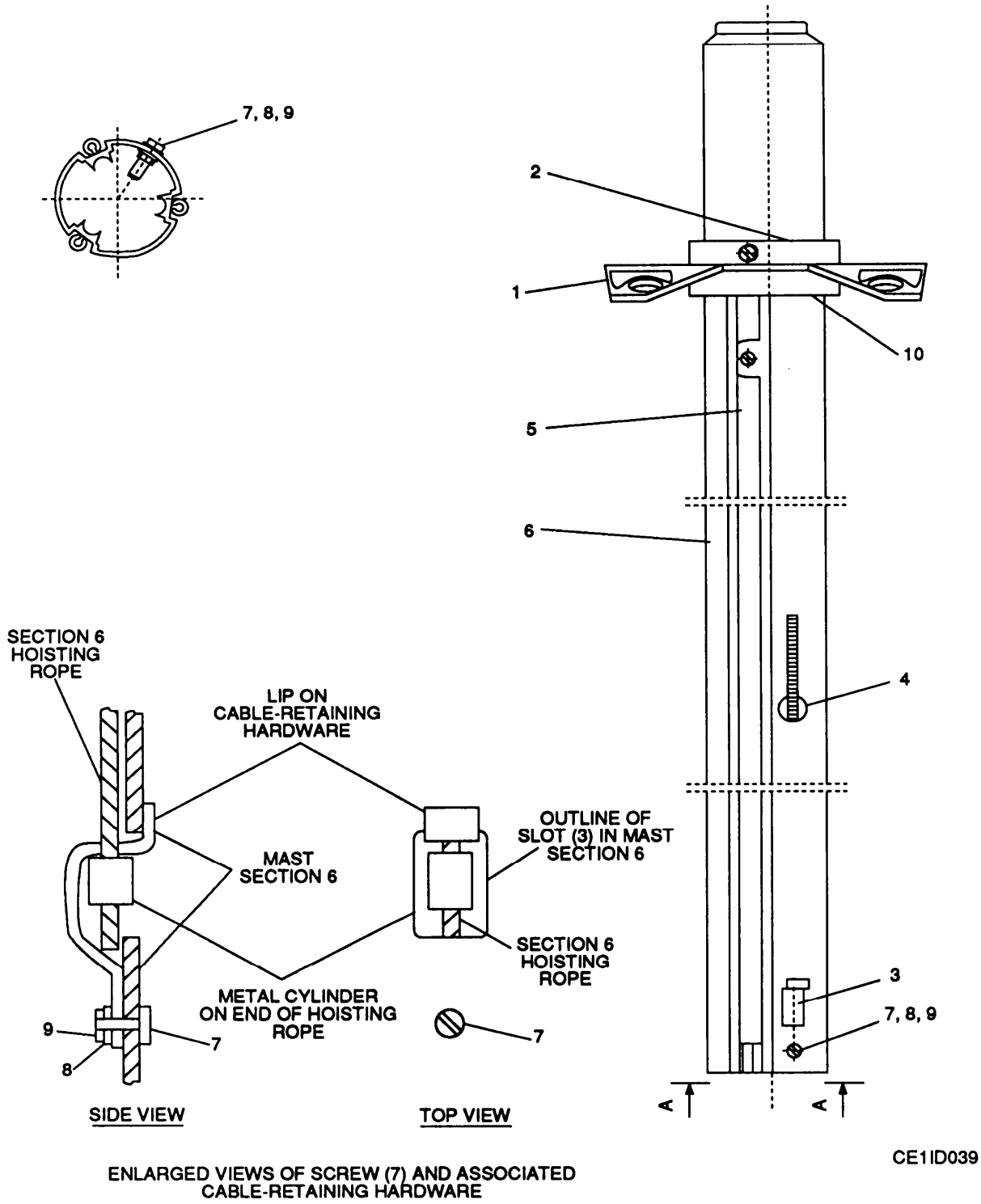
(13) Remove screw (7), washer (8), and nut (9) from bottom of section 6, using needle-nose pliers to hold nut.

(14) Remove section 6 hoisting rope from section 6 by:

(a) Pushing cable-retaining hardware at end of rope out of slot (3) and into the interior of section 6.

(b) Placing section 5 pulley housing (1, fig. 5-7) over hole (4, fig. 5-8) near bottom of section 6.

(c) Pulling end of hoisting rope out of section 6 through hole (4) and slot in pulley housing.



ENLARGED VIEWS OF SCREW (7) AND ASSOCIATED CABLE-RETAINING HARDWARE

Figure 5-8. Mast Assembly Section 6

b. Cleaning.

WARNING

USE OF CLEANING SOLVENT

Fumes of TRICHLOROTRIFLUOROETHANE are poisonous. Provide adequate ventilation whenever you use TRICHLOROTRIFLUORO-ETHANE. Do not use solvent near heat or open flame. TRICHLOROTRIFLUOROETHANE will not burn, but heat changes the gas into poisonous, irritating fumes. Do not breathe the fumes or vapors. TRICHLOROTRIFLUORO-ETHANE dissolves natural skin oils. Do not get the solvent on your skin. Use gloves, sleeves, and an apron that the solvent cannot penetrate. If the solvent is taken internally, see a doctor immediately.

Using a clean cloth and trichlorotrifluoroethane, clean grease from disassembled pulley, washers, and shaft, and from pulley housing and plastic guides (11, fig, 5-7 and 5, fig. 5-8). Also, clean grease from the plastic guides of the other mast sections and from the ring, upper plate, and lower plate (fig. 1-2).

c. Inspection.

(1) Inspect plastic guides for wear, cracked, broken, or missing guides.

(2) Inspect disassembled pulley, washers, and shaft for cracks and wear.

d. Lubrication.

(1) Apply a coat of silicone grease to disassembled shaft and pulley.

(2) Apply a thin coat of silicone grease to all plastic guides. Wipe off excess grease with a clean cloth.

(3) Apply silicone grease to the special lubricating passages of the ring, upper plate, and lower plate (fig. 1-2).

e. Replacement.

(1) Place section 5 pulley housing (1, fig. 5-7) over hole (4, fig. 5-8) near bottom of section 6 (6).

(2) Insert cable-retaining-hardware end of replacement section 6 hoisting rope through slot in section 5 pulley housing and through hole (4) to interior of section 6.

(3) Seat cable-retaining hardware on end of hoisting rope into slot (3) at bottom of section 6 in position indicated by the enlarged views in figure 5-8.

(4) Secure cable-retaining hardware in this position with screw (7), washer (8), and nut (9). Use needle-nose pliers to hold nut.

(5) Aline slot (3) of section 6 with pulley slit at top of section 5 (10, fig. 5-7).

(6) Insert bottom of section 6 (with section 5 pulley housing on it) into section 5 until narrow end of white position indicator on section 6 reaches the top of section 5.

(7) Install mast stop clamp (9) with screws (7).

(8) Position pulley housing against mast stop clamp.

(9) Rotate pulley housing on section 5 so that pulley (2) will be directly above mast stop clamp. Secure pulley housing with screws (5).

(10) Form a loop in hoisting rope just below pulley housing and install pulley (2) in loop.

(11) Place washer (8) on each side of pulley. Push loop with pulley and washers up into pulley housing. Using a screwdriver shaft, aline pulley and washers with holes in pulley housing.

(12) Install shaft (3) and replacement cotter pin (4). Bend ends of cotter pin back around shaft.

(13) Position end of section 6 hoisting rope in slot at top of section 4 (1, fig. 5-6) and secure it there with cable clamp (10) and screws (9).

(14) Push mast sections together, store tail end of winch rope lock telescopic mast in its fully retracted condition (para 2-12), move telescopic mast back to base plate, and reinstall 15-meter mast (para 2-11).

5-18 MAST ASSEMBLY SECTION 1.

a. Removal.

(1) Disassemble 15-meter mast to its fully retracted position (para 2-12).

WARNING

Telescopic mast is heavy. To avoid injury, two people are required for lifting and carrying it.

(2) Using handle and ring on telescopic mast, move telescopic mast to a suitable work area for removing mast section 1. Leave telescopic mast in a horizontal position with its handle facing upward. Telescopic mast can be rotated as required to perform subsequent steps.

(3) Unlock mast sections 1 through 6 (para 2-11.1).

(4) Release winch rope from stored position on mast section 1 (para 2-11.1).

(5) Separate section 1 from section 2 in accordance with paragraph 5-12, steps a (5) through a (15).

b. Cleaning.

WARNING

USE OF CLEANING SOLVENT

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Using a clean cloth and trichlorotrifluoroethane, clean grease from disassembled pulley (4, fig. 5-2), washers (5), and shaft (2), and from pulley housing (6), ring (26), and plastic guides (24). Also, clean grease from the plastic guides of the other mast sections and from the upper and lower plates (fig. 1-2).

c. Inspection.

(1) Inspect all plastic guides for wear, cracked, broken, or missing guides.

(2) Inspect disassembled pulley, washers, and shaft for cracks and wear.

d. Lubrication.

(1) Apply a coat of silicone grease to shaft (2) and pulley (4).

(2) Apply a thin coat of silicone grease to all plastic guides. Wipe off excess grease with a clean cloth.

(3) Apply silicone grease to the special lubricating passages of the ring, upper plate, and lower plate (fig. 1-2).

e. Replacement.

(1) Install replacement section 1 in telescopic mast in accordance with paragraph 5-12, steps e(7) through e(14).

(2) Push mast sections together, store tail end of winch rope, lock telescopic mast in its fully retracted condition (para 2-12), move telescopic mast back to base plate, and reinstall 15-meter mast (para 2-11).

5-19 MAST ASSEMBLY SECTION 2.

a. Removal.

(1) Disassemble 15-meter mast to its fully retracted position (para 2-12).

WARNING

Telescopic mast is heavy, To avoid injury, two people are required for lifting and carrying it.

(2) Using handle and ring on telescopic mast, move telescopic mast to a suitable work area for removing mast section 2. Leave telescopic mast in a horizontal position with its handle facing upward. Telescopic mast can be rotated as required to perform subsequent steps.

(3) Unlock mast sections 1 through 6 (para 2-11.1).

(4) Release winch rope from stored position on mast section 1 (para 2-11.1).

(5) While another person supports (but does not pull on) upper end of telescopic mast to keep it off ground, pull on winch rope until telescopic mast is fully extended (fig. 1-7).

(6) Remove two sets of screws (1, fig. 5-9) and cable clamps (2) from upper support ring (3) on section 1 (4) to free the ends of section 3 hoisting cable.

(7) Rotate telescopic mast until the three screws (5) that secure stop cleat (6) to mast section 1 are . on top of mast section 1. Then remove these three screws and let stop cleat (6) drop between sections 1 and 2 (7) onto top of section 2.

(8) Separate sections 1 and 2 approximately 2 feet (about 0.6 meter) and remove stop cleat (6) from top of section 2.

(9) Remove screws (22) and nut plates (23) that secure shaft housing assembly to bottom of section 2 (two places). Remove shaft housing assembly.

(10) Remove cotter pin (8) from each of two shafts (9).

(11) Remove shafts (9), pulley housing (10), pulleys (11), and winch rope from the two pulley yokes (21).

(12) Remove cotter pin (12) from each shaft (13).

(13) Remove shafts, pulleys (15), and washers (14) from two pulley housings (16) on section 2.

(14) Bend ends of section 3 hoisting rope and feed these bent ends through two slits (17) and out the top of section 2 between sections 2 and 3 (18).

(15) Remove screws (19) and cable clip (20).

(16) Separate section 3 from section 2 by pulling on protruding section 3 hoisting rope.

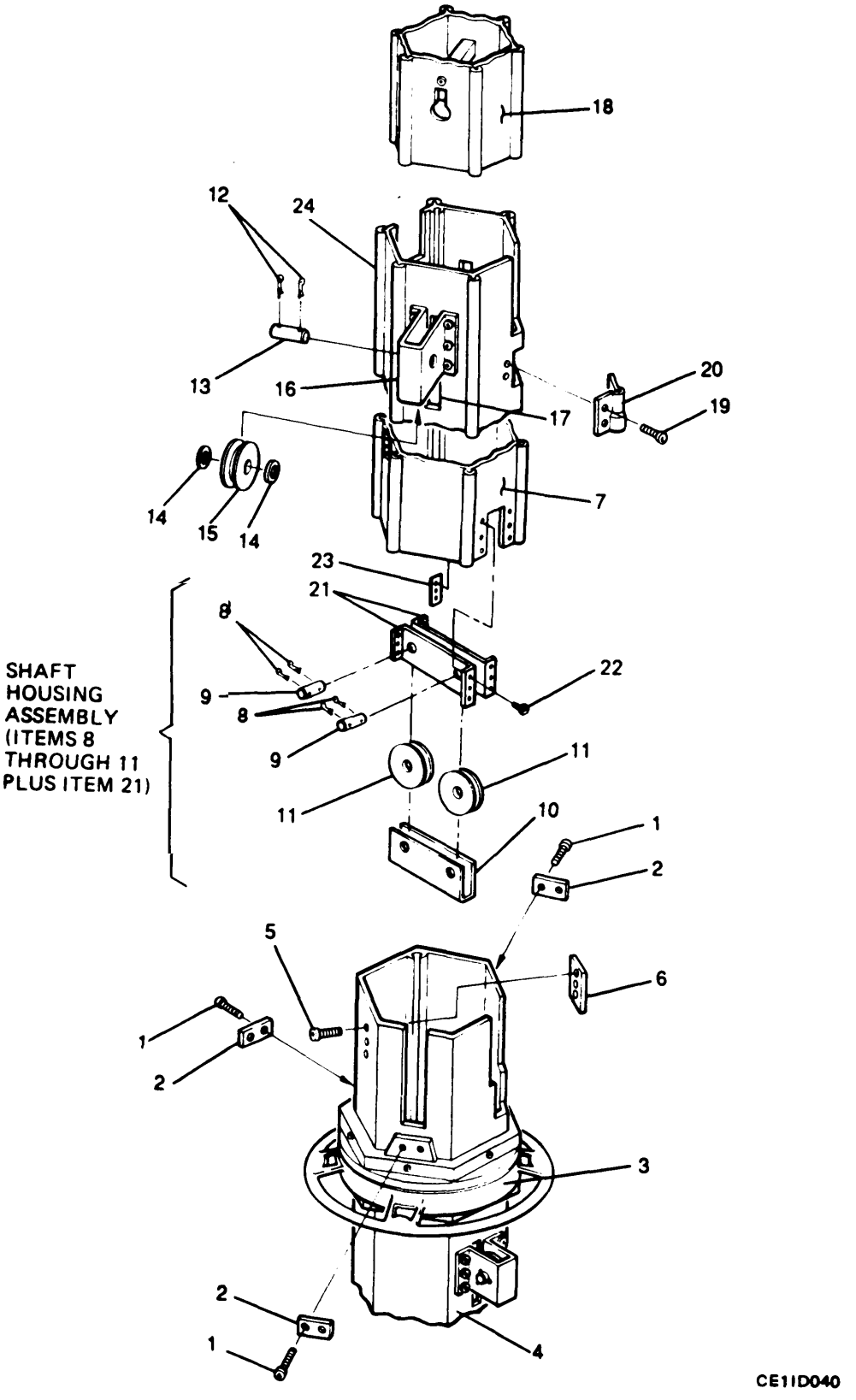

Figure 5-9. Mast Assembly Section 2 Replacement

b. Cleaning.

WARNING

USE OF CLEANING SOLVENT

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Using a clean cloth and trichlorotrifluoroethane, clean grease from disassembled pulleys, washers, and shafts, and from pulley housings and plastic guides (24, fig. 5-9). Also, clean grease from the plastic guides of all other mast sections and from the ring, upper plate, and lower plate (fig. 1-2).

c. Inspection.

(1) Inspect all plastic guides for wear, cracked, broken, or missing guides.

(2) Inspect disassembled pulleys, washers, and shafts for cracks and wear.

d. Lubrication.

(1) Apply a coat of silicone grease to disassembled shafts and pulleys.

(2) Apply a thin coat of silicone grease to all plastic guides. Wipe off excess grease with a clean cloth.

(3) Apply silicone grease to the special lubricating passages of the ring, upper plate, and lower plate (fig. 1-2).

e. Replacement.

(1) Aline mast section 3 (18, fig. 5-9) with replacement mast section 2 (7) so that the pulley at the top of section 3 lines up with cable clip (20) at the top of section 2.

(2) Feed each end of section 3 hoisting rope into top of mast section 2 and out through the associated slit (17) and pulley housing (16).

(3) While one person maintains a moderately tight pull on each end of the section 3 hoisting rope, another person inserts section 3 into section 2 approximately 3 feet (about 0.9 meter).

(4) At each end of section 3 hoisting rope make a loop in hoisting rope just below pulley housing.

(5) Install pulley (15) in loop.

(6) Place washer (14) on each side of pulley. Push loop with pulley and washers up into pulley housing. Using a screwdriver shaft, aline pulley and washers with holes in pulley housing.

(7) Install shaft (13) and replacement cotter pin (12). Bend ends of cotter pin back around shaft.

(8) Position pulleys (11), shafts (9), pulley housing (10) and winch rope inside the two pulley yokes (21), with winch rope at bottom of pulley housing.

(9) Secure shafts (9) with replacement cotter pins (8). Bend ends of each cotter pin back around shaft.

(10) Install shaft housing assembly (fig. 5-9) in bottom of mast section 2 (7) by means of screws (22) and nut plates (23).

(11) Secure section 4 hoisting rope to section 2 with rope clip (20) and screws (19).

(12) Aline mast section 1 with mast section 2 so that holes for 3 screws (5) lineup with the stop cleat that is screwed to mast section 2.

(13) While being careful not to kink winch rope, insert section 2 into section 1 (4) approximately 2 feet (about 0.6 meter). Keep a moderately tight pull on end of winch rope during insertion.

(14) Using a pair of needle-nose pliers, position stop cleat (6) between section 1 and section 2 as required and secure with three screws (5).

(15) Secure each end of section 3 hoisting rope to upper support ring (3) with cable clamp (2) and two screws (1).

(16) Push mast sections together, store tail end of winch rope, lock telescopic mast in its fully retracted condition (para 2-12), move telescopic mast back to base plate, and reinstall 15-meter mast (para 2-11).

5-20 MAST ASSEMBLY SECTION 3.

a. Removal.

(1) Disassemble 15-meter mast and remove section 3 hoisting cable (para 5-14).

(2) Remove screws (1, fig. 5-10) and cover (2) from section 3.

(3) Remove cotter pin (3) from shaft (4).

(4) Remove shaft, pulley (5), and washers (6) from pulley housing (7).

(5) Bend end of section 4 hoisting rope and feed this bent end through slit (8) and out the top of section 3 between sections 3 and 4 (9).

(6) Remove upper set of screws (15) and cable clips (16) from section 3.

(7) Separate section 4 from section 3 by pulling on protruding section 4 hoisting rope.

(8) Pull section 4 hoisting rope through slit (8) and out top of section 3.

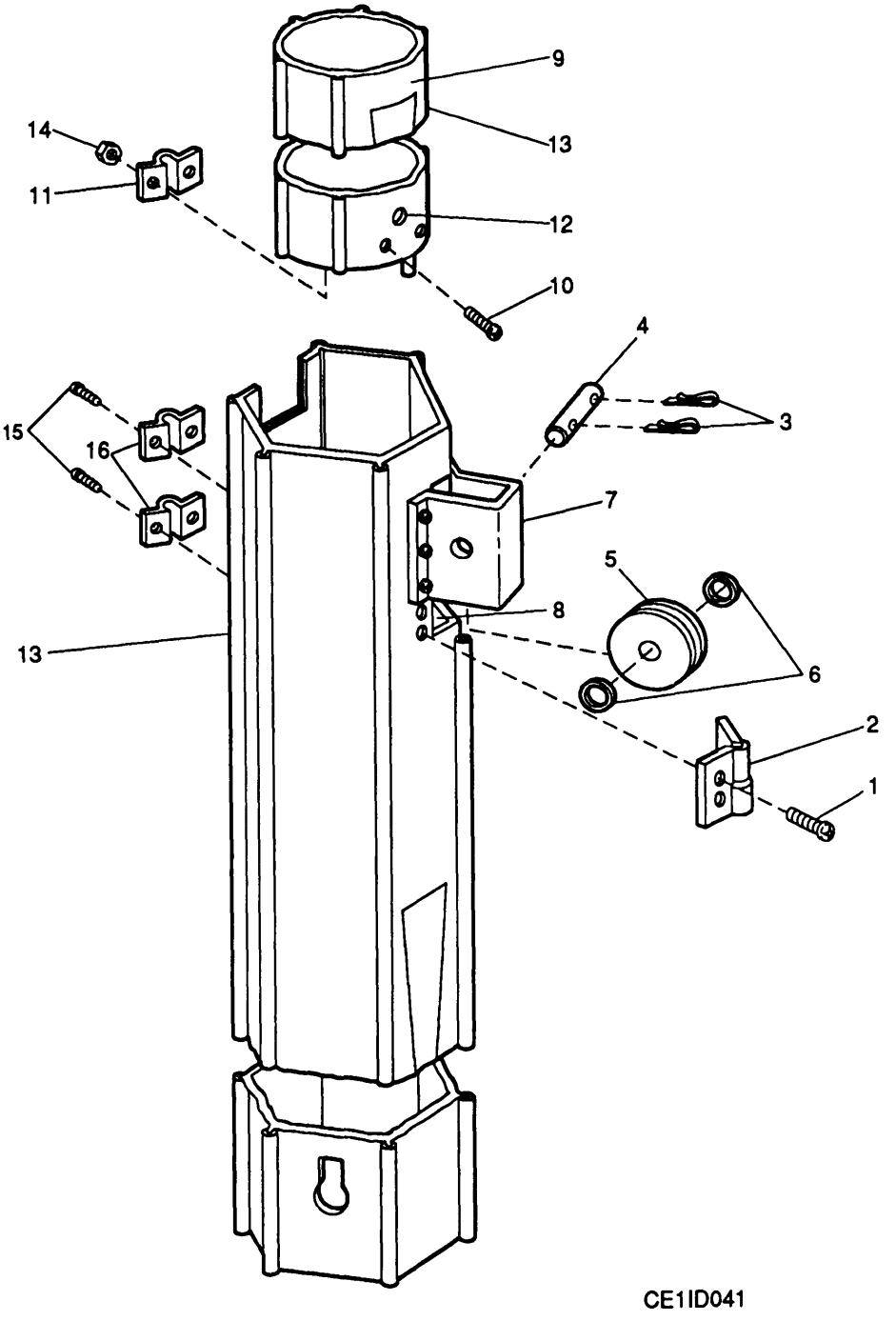

Figure 5-10. Mast Assembly Section 3 Replacement

b. Cleaning.

WARNING

USE OF CLEANING SOLVENT

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Using a clean cloth and trichlorotrifluoroethane, clean grease from disassembled pulley, washers, and shaft, and from pulley housing and plastic guides (13, fig. 5-10). Also, clean grease from the plastic guides of the other mast sections and from the ring, upper plate, and lower plate (fig. 1-2).

c. Inspection.

(1) Inspect plastic guides for wear, cracked, broken, or missing guides.

(2) Inspect disassembled pulley, washers, and shaft for cracks and wear.

d. Lubrication.

(1) Apply a coat of silicone grease to disassembled shaft and pulley.

(2) Apply a thin coat of silicone grease to all plastic guides. Wipe off excess grease with a clean cloth.

(3) Apply silicone grease to the special lubricating passages of the ring, upper plate, and lower plate (fig. 1-2).

e. Replacement,

(1) Feed end of section 4 hoisting rope down through top of replacement mast section 3 and out through slit (8, fig. 5-10).

(2) Aline pulley housing (7) at top of mast section 3 with screw (10) and hole (12) at bottom of mast section 4.

(3) Insert section 4 into replacement section 3 approximately 3 feet (about 0.9 meter) while pulling on section 4 hoisting rope below pulley housing (7) as required to take up any slack in this hoisting rope.

(4) Make a loop in hoisting rope just below pulley housing (7).

(5) Install pulley (5) in hop.

(6) Place a washer (6) on each side of pulley. Push loop with pulley and washers up into pulley housing. Using a screwdriver shaft, aline pulley and washers with holes in pulley housing.

(7) Install shaft (4) and replacement cotter pin (3). Bend ends of cotter pin back around shaft.

(8) Install cover (2) and secure with screws (1).

(9) Position end of section 5 hoisting rope in slot at top of mast section 3 and secure with the upper set of screws (15) and cable clips (16).

(10) Reinstall section 3 hoisting rope (para 5-14e).

(11) Push mast sections together, store tail end of winch rope, lock telescopic mast In its fully retracted condition (para 2-12). move telescopic mast back to base plate, and reinstall 15-meter mast (para 2-11).

5-21 MAST ASSEMBLY SECTION 4.

a. Removal.

(1) Disassemble 15-meter mast to its fully retracted position (para 2-12).

WARNING

Telescopic mast is heavy. To avoid injury, two people are required for lifting and carrying it.

(2) Using handle and ring on telescopic mast, move telescopic mast to a suitable work area for removing mast section 4, Leave telescopic mast in a horizontal position with its handle facing upward. Telescopic mast can be rotated as required to perform subsequent steps,

(3) Unlock mast Sections 1 through 6 (pars 2-11 .1).

(4) Release winch rope from stared position on mast section 1 (para 2-11.1).

(5) While another person supports (but does not pull on) upper end of telescopic mast to keep it off ground, pull on winch rope until telescopic mast is fully extended (fig. 1-7).

(6) Remove screws (1, fig. 5-11) and cable clip (2) from section 2 (3).

(7) Remove upper set of screws (15, fig. 5-10) and cable clips (16) from Section 3 (5, fig. 5-11).

(8) Separate section 4 (4) from section 3.

(9) Remove screw8 (6), nuts (10), and cable clip (7).

(10) Remove section 4 hoisting rope from hole (8) of section 4.

(11) Remove screws (9, fig. 5-6) and clamp (10) that secures end of section 6 hoisting rope to top of mast section 4.

(12) Separate section 5 (10, fig. 5-7) from section 4 (1, fig. 5-6), along with attached section 5 hoisting rope.

(1 4 Remove section 5 hoisting rope from section 4 by pulling it carefully off pulley (1 6) in pulley housing (12) of section 4 and up through interior of section 4.

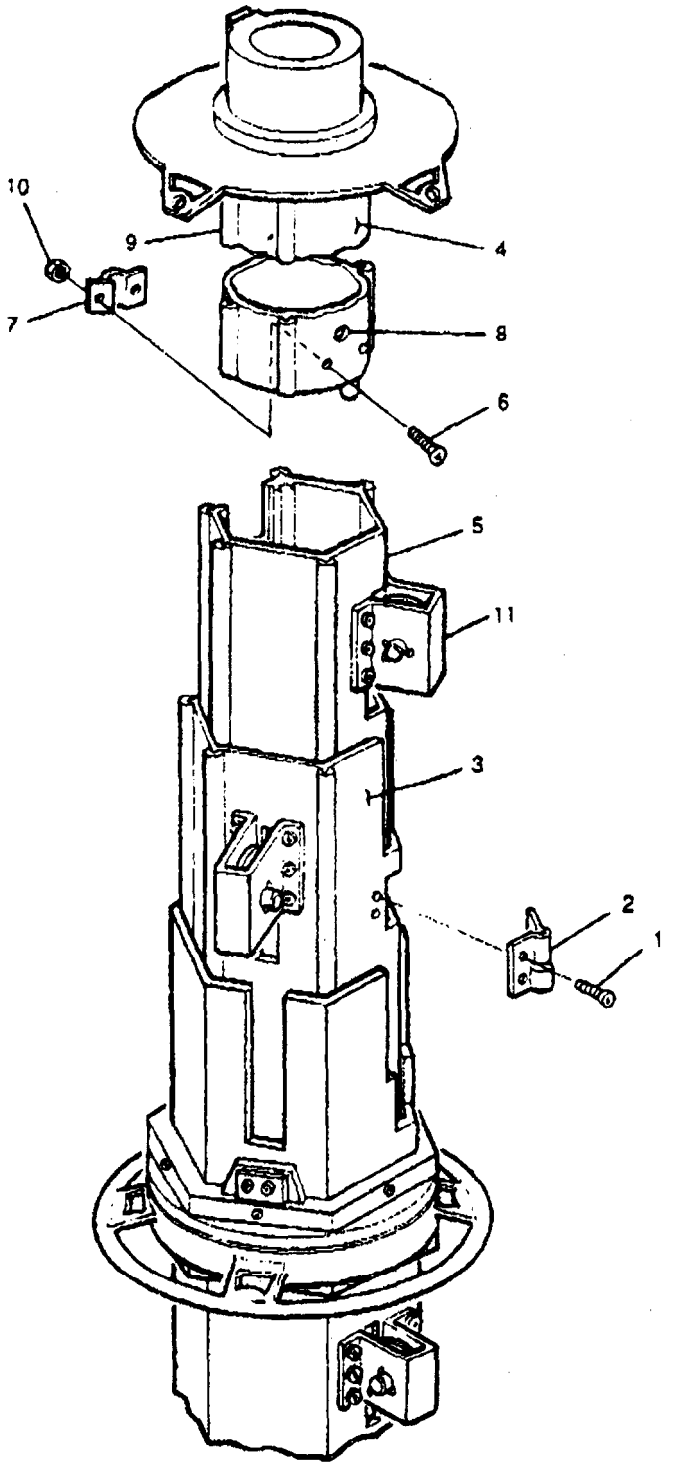

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Figure 5-11. Mast Assembly Section 4 Replacement

b. Cleaning.

WARNING

USE OF CLEANING SOLVENT

Fumes of TRICHLOROTRIFLUOROETHANE are poisonous. Provide adequate ventilation whenever you use TRICHLOROTRIFLUORO-ETHANE. Do not use solvent near heat or open flame. TRICHLOROTRIFLUOROETHANE will not bum, but heat changes the gas into poisonous, irritating fumes. Do not breathe the fumes or vapors. TRICHLOROTRIFLUORO-ETHANE dissolves natural skin oils. Do not get the solvent on your skin. Use gloves, sleeves, and an apron that the solvent cannot penetrate. If the solvent is taken internally, see a doctor immediately.

Using a clean cloth and trichlorotrifluoroethane, clean grease from plastic guides (9, fig. 5-11). Also, clean grease from the plastic guides of the other mast sections and from the ring, upper plate, and lower plate (fig. 1-2).

c. Inspection.

Inspect plastic guides for cracked, broken, or missing guides.

d. Lubrication.

(1) Apply a thin coat of silicone grease to all plastic guides.

(2) Apply silicone grease to the special lubricating passages provided in the upper support rings for the ring, upper plate, and lower plate (fig. 1-2).

e. Replacement.

(1) Feed end of section 4 hoisting rope down through hole (8, fig. 5-11) in replacement section 4 (4) and secure it to interior of section 4 with clamp (7), screws (6), and nuts (10).

(2) Aline hole at bottom of section 4 with pulley housing (11) at top of section 3 (5).

(3) While being careful not to allow kinking of section 4 hoisting rope, insert section 4 into section 3.

(4) Secure other end of section 4 hoisting rope to top of section 2 (3) with cable clip (2) and screws (1).

(5) Insert free end of section 5 hoisting rope, whose other end remains attached to bottom of section 5, down through top of section 4 and out over pulley (16, fig. 5-6) in pulley housing (12).

(6) Aline cable connection (6, fig. 5-7) at bottom of section 5 with pulley (16, fig. 5-6) at top of section 4 (1).

(7) While being careful to avoid kinking of hoisting rope, insert section 5 into section 4.

(8) Secure end of section 5 hoisting rope to top of section 3 with upper set of screws (15, fig. 5-10) and cable clips (16).

(9) Attach end of section 6 hoisting rope to top of mast section 4 with screws (9, fig. 5-6) and clamp (10).

(10) Push mast sections together, store tail end of winch rope, lock telescopic mast in its fully retracted condition (para 2-12), move telescopic mast back to base plate, and reinstall 15-meter mast (para 2-11).

5-22 MAST ASSEMBLY SECTION 5.

a. Removal.

(1) Disassemble 15-meter mast and remove section 5 hoisting cable (para 5-14).

(2) Separate mast section 5 (10, fig. 5-7) from mast section 4 (1, fig. 5-6).

(3) Remove mast stop clamp (9, fig. 5-7) and screws (7) at top of mast section 5.

(4) Remove screws (5) that secure pulley housing (1) to top of mast section 5.

(5) Slide pulley housing onto mast section 6 (6, fig. 5-8).

(6) Separate mast section 5 from mast section 6.

b. Cleaning.

WARNING

USE OF CLEANING SOLVENT

Fumes of TRICHLOROTRIFLUOROETHANE are poisonous. Provide adequate ventilation whenever you use TRICHLOROTRIFLUORO-ETHANE. Do not use solvent near heat or open flame. TRICHLOROTRIFLUOROETHANE will not burn, but heat changes the gas into poisonous, irritating fumes. Do not breathe the fumes or vapors. TRICHLOROTRIFLUORO-ETHANE dissolves natural skin oils. Do not get the solvent on your skin. Use gloves, sleeves, and an apron that the solvent cannot penetrate. If the solvent is taken internally, see a doctor immediately.

Using a clean cloth and trichlorotrifluoromethane, clean grease from disassembled pulley, washers, and shaft, and from pulley housing and plastic guides (11, fig. 5-7). Also, clean grease from the plastic guides of the other mast sections and from the ring, upper plate, and lower plate (fig. 1-2).

c. Inspection.

(1) Inspect plastic guides for wear, cracked, broken, or missing guides.

(2) Inspect disassembled pulley, washers, and shaft for cracks and wear.

d. Lubrication.

(1) Apply a coat of silicone grease to disassembled shaft and pulley.

(2) Apply a thin coat of silicone grease to all plastic guides.

(3) Apply silicone grease to the special lubricating passages provided in the upper support rings for the ring, upper plate, and lower plate (fig. 1-2).

e. Replacement.

(1) Aline slot (3, fig. 5-8) at bottom of section 6 (6) with pulley slit at top of section 5 (10, fig. 5-7).

(2) Slide mast section 6 (6, fig. 5-8) into top of replacement mast section 5 (10, fig. 5-7) until narrow tip of white position indicator on mast section 6 reaches top of mast section 5.

(3) Install mast stop clamp (9) with screws (7).

(4) Slide pulley housing (1) from mast section 6 onto top of mast section 5 and secure it in place with screws (5) against mast stop clamp, with Wiley (2) directly above mast stop clamp.

(5) Align hole for screw (6) at bottom of mast section 5 with pulley housing (12, fig. 5-6) at top of mast section 4 (1).

(6) Insert mast section 5 into mast section 4 until screw hole at bottom of mast section 5 is in position shown by enlarged views in figure 5-7.

(7) Reinstall section 5 hoisting rope, reassemble mast section 5, and reconnect the section 5 and section 6 hoisting cables (para 5-16e).

(8) Push mast sections together, store tail end of winch rope, lock telescopic mast in its fully retracted condition (para 2-12), move telescopic mast back to base plate, and reinstall 15-meter mast (para 2-11).

5-23 MAST ASSEMBLY SECTION 6.

a. Removal.

(1) Disassemble 15-meter mast to its fully retracted position (para 2-1 2).

WARNING

Telescopic mast is heavy. To avoid injury, two people are required for lifting and carrying it.

(2) Using handle and guy ring on telescopic mast, move telescopic mast to a suitable work area for removing mast section 6. Leave telescopic mast in a horizontal position with its handle facing upward. Telescopic mast can be rotated as required to perform subsequent steps.

(3) Unlock mast sections 1 through 6 (para 2-11.1).

(4) Release winch rope from stored position on mast section 1 (para 2-11.1).

(5) While another person supports (but does not pull on) upper end of telescopic mast to keep it off ground, pull on winch rope until telescopic mast is fully extended (fig. 1-7).

(6) Remove screws (9, fig. 5-6) and cable clamp (10) from top of section 4 (1).

(7) Remove screws (7, fig. 5-7) and mast stop clamp (9) from top of section 5 (10).

(8) Remove screws (5) that secure pulley housing (1) to top of section 5.

(9) Slide pulley housing onto section 6 (6, fig. 5-8).

(10) Pull section 6, along with attached end of section 6 hoisting rope, out of section 5 (10, fig. 5-7).

(11) Remove screw (7, fig. 5-8), washer (8), and nut (9) that secure section 6 hoisting rope to bottom of section 6.

(12) Remove section 6 hoisting rope by:

(a) Pushing cable-retaining hardware at end of rope out of slot (3) and into the interior of section 6.

(b) Pulling end of hoisting rope out of section 6 through hole (4).

b. Cleaning.

WARNING

USE OF CLEANING SOLVENT

Fumes of TRICHLOROTRIFLUOROETHANE are poisonous. Provide adequate ventilation whenever you use TRICHLOROTRIFLUORO-ETHANE. Do not use solvent near heat or open flame. TRICHLOROTRIFLUOROETHANE will not burn, but heat changes the gas into poisonous, irritating fumes. Do not breathe the fumes or vapors. TRICHLOROTRIFLUORO-ETHANE dissolves natural skin oils. Do not get the solvent on your skin. Use gloves, sleeves, and an apron that the solvent cannot penetrate. If the solvent is taken internally, see a doctor immediately.

Using a clean cloth and trichlorotrifluoroethane, clean grease from plastic guides (5, fig. 5-8). Also, clean grease from the plastic guides of the other mast sections and from the ring, upper plate, and lower plate (fig. 1-2).

c. Inspection. Inspect plastic guides for wear, cracked, broken, or missing guides.

d. Lubrication.

(1) Apply a thin coat of silicone grease to all plastic guides.

(2) Apply silicone grease to the special lubricating passages provided in the upper support rings for the ring, upper plate, and lower plate (fig. 1-2).

e. Replacement.

(1) Slip section 5 pulley housing (1, fig, 5-7) and associated section 6 hoisting rope over bottom of replacement mast section 6 (6, fig. 5-8) and slide it up over hole (4).

(2) Insert cable-retaining hardware end of section 6 hoisting rope into hole (4) and downward inside section 6 to slot (3).

(3) Seat cable-retaining hardware into slot (3) at bottom of section 6 in position indicated by the enlarged views in figure 5-8.

(4) Secure cable-retaining hardware in this position by means of screw (7, fig. 5-7), washer (8), and nut (9). Use needle-nose pliers to hold nut.

(5) Aline slot (3) at bottom of section 6 with pulley slit at top of section 5 (10).

(6) Insert section 6 (with section 5 pulley housing on it) into section 5 until narrow end of white position indicator on section 6 reaches the top of section 5.

(7) Install mast stop clamp (9) with screws (7).

(8) Position pulley housing against mast stop clamp.

(9) Rotate pulley housing so that pulley (2) will be directly above mast stop clamp. Secure pulley housing with screws (5).

(10) Secure other end of section 6 hoisting rope to top of section 4 (1, fig. 5-6) with cable clamp (10) and screws (9).

(11) Push mast sections together, store tail end of winch rope, lock telescopic mast in its fully retracted condition (para 2-12), move telescopic mast back to base plate, and reinstall 15-meter mast (para 2-11).

5-24 YELLOW STAKE, TURNING LEVER, GUY STAKES, STAY ANCHORS, BASE PLATE, AND EXTENSION TUBES.

Repair by replacement. Use information provided in paragraph 2-12 for removal. Use information provided in paragraphs 2-9 through 2-11 for replacement.

APPENDIX A

REFERENCES

DA Form 2404	Equipment Inspection and Maintenance Worksheet
DA Form 2028	Recommended Changes to Publications and Blank Forms
DA Form 2028-2	Recommended Changes to Equipment Publications
DA Pam 738-750	The Army Maintenance Management System (TAMMS)
DA Pam 25-30	Consolidated Index of Army Publications and Blank Forms
FM 21-11	First Aid for Soldiers
SF 361	Transportation Discrepancy Report (TDR): AR 55-38
SF 364	Report of Discrepancy (ROD): AR 735-11-2
SF 368	Product Quality Deficiency Report
TB 11-5800-215-15	Warranty Program, MSE
TB 43-0118	Field Instructions for Painting and Preserving Electronic Command Equipment
TB 43-0129	Safety measures to be observed when installing and using whip antennas, field-type masts, towers, antennas and metal poles that are used with communication, radar and direction finder equipment
TM 750-244-2	Destruction of Army Electronic Materiel
TM 11-5820-1022-13-1	Operators, Unit and Direct Support Maintenance Manual for Radio Access Unit AN/TRC-191
TM 11-5820-1029-13&P	Operator's, Unit and Direct Support Maintenance Manual Including Spare Parts and Special Tools Listing for Radio Set AN/GRC-226 (V) 1 and Radio Set AN/GRC-226 (V) 2

APPENDIX B

MAINTENANCE ALLOCATION

Section I. INTRODUCTION

B-1 GENERAL.

This appendix provides for a summary of the maintenance operations for the Mast, Antenna 15 Meter AB-1339/G (15-meter mast). It authorizes levels of 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 FUNCTION.

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 to 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 the specified parameters.

e. Align. To adjust specified variable elements of an item to bring about optimum or desired performance.

f. Calibrate. To determine and then correct or adjust in instruments or test measuring and diagnostic equipment used in precision measurement. Consists of the comparison 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 sericeable 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.

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 materiel maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (hours, miles, etc.) considered in classifying Army equipment/components.

B-3 COLUMN ENTRIES (SECTION II).

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 the purpose of having the group numbers in the MAC and RPSTL coincide.

d. Column (4) - Maintenance Level. 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 in hours required to perform that maintenance function at the indicated level of maintenance. If the number or complexity of the tasks within the listed maintenance function vary at different maintenance levels, appropriate "worktime" figures will be shown for each level. 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 (L is Specialized Repair Activity)
D - Depot

e. Column (5) - Tools and Equipment. Column (5) specifies by code, those common tool sets (not individual tools) and specified 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 of the maintenance function.

b. Maintenance Level. The codes in this column indicate the maintenance level allocated the tools or test equipment.

c. Nomenclature. This column lists the manufacturer's part number of the tool followed by the Commercial and Government Entity (CAGE) code for Manufacturers (5 digits) in parentheses.

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

e. Tool Number. This column lists the manufacturer's part number of the tool followed by the Commercial and Government Entity (CAGE) code for manufacturers (5-digit) in parentheses.

B-5 REMARKS (SECTION IV).

a. Reference Code. This code refers to the appropriate item in Section II, 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 MAST, ANTENNA, 15 METER, AB-1339/G

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIP	(6) REMARKS
			C	O	F	H	D		
00	MAST, ANTENNA 15 METER AB-1339/G	INSPECT	0.2						A
		INSTALL	1.0						
		SERVICE	0.2						B
		REPLACE		0.2					
		REPAIR					*		D
	MAST, TELESCOPIC	INSPECT		0.2					A
		REPAIR		0.5					J
		REPLACE		0.2					
0101	SECTION 1, MAST	REPAIR		0.5					E
		REPLACE		0.5					
		REPAIR					*		D
0102	SECTION 2, MAST	REPAIR		0.5					E
		REPLACE		0.5					
		REPAIR					*		D
0103	SECTION 3, MAST	REPAIR		0.5					E
		REPLACE		0.5					
		REPAIR					*		D
0104	SECTION 4, MAST	REPAIR		0.5					E
		REPLACE		0.5					
		REPAIR					*		D
0105	SECTION 5, MAST	REPAIR		0.5					E
		REPLACE		0.5					
		REPAIR					*		D
0106	SECTION 6, MAST	REPAIR		0.5					E
		REPLACE		0.5					
		REPAIR					*		D
02	ACCESSORY KIT COMMUNICA-TIONS EQUIP-MENT	INSPECT		0.2					A
		REPAIR		0.5					C
		REPLACE		0.2					
0201	STAY WITH WINDER (10 M)	INSPECT		0.1					A
		REPAIR		0.3					H
		REPLACE		0.1					
		REPAIR					*		D

SECTION II. MAINTENANCE ALLOCATION CHART FOR MAST, ANTENNA, 15 METER, AB-1339/G

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIP	(6) REMARKS
			C	O	F	H	D		
0202	STAY WITH WINDER (15 M)	INSPECT REPAIR REPLACE REPAIR		0.1 0.3 0.1			 * 		A H D
0203	STAY WITH WINDER (20 M)	INSPECT REPAIR REPLACE REPAIR		0.1 0.3 0.1			 * 		A H D
0204	WINCH	REPAIR REPLACE REPAIR		1.5 0.5			 * 		G D
0205	BASEPLATE, ANTENNA SUPPORT	REPAIR REPLACE		0.2 0.2					F

SECTION III. TOOLS AND TEST EQUIPMENT FOR MAST, ANTENNA, 15 METER, AB-1339/G

TOOLS OR TEST EQUIPMENT REF. CODE	MAINTENANCE LEVEL	NOMENCLATURE	NSN/NATO STOCK NUMBER	TOOL NUMBER
THE TOOLS FOR THE REPLACE/REPAIR PROCEDURES FOR THE MAST, ANTENNA, 15 METER (AB-1339/G) ARE IDENTIFIED IN THE BASIC ISSUE ITEMS LIST OF THE LINE-OF-SIGHT MULTI-CHANNEL RADIO TERMINAL AND RADIO ACCESS UNIT.				

SECTION IV. REMARKS FOR MAST, ANTENNA, 15 METER, AB-1339/G

REFERENCE CODE	REMARKS
A	VISUAL
B	PERFORM PMCS (LUBRICATION AND OIL)
C	REPAIR IS LIMITED TO REPLACEMENT OF EXTENSION TUBE(S), BAG, GROUND SPIKE(S), STAY ANCHOR(S), TURNING LEVER, SPIKE, MEASURING ROPE, AND/ OR CONTENTS LIST
D	(*) REFER TO AUTOMATIC RETURN ITEMS LIST (ARIL) FOR SOURCE OF REPAIR
E	REPAIR INCLUDES REPLACEMENT OF SECTION HARDWARE
F	REPAIR INCLUDES REPLACEMENT OF CHAIN(S), SCREW(S), NUT(S) OR WASHERS
G	REPAIR INCLUDES REPLACEMENT OF WINCH HANDLE AND SHEAR PIN
H	REPAIR INCLUDES REPLACEMENT OF SAFETY HOOK(S), ROPE, AND/OR STAY WINDER
J	REPAIR IS LIMITED TO REPLACEMENT OF MASTHEAD CAP, HOISTING CABLES, AND/OR INDIVIDUAL MAST SECTIONS

APPENDIX C

COMPONENTS OF END ITEM LIST

Section I. INTRODUCTION

C-1. SCOPE.

This appendix lists integral components of and basic issue items for the Mast, Antenna 15-Meter AB-1339/G (15-meter mast) to help you inventory items required for safe and efficient operation.

C-2. GENERAL.

This Components of End Item List is divided into the following sections:

a. Section II. Integral Components of the End Item. These components, when assembled, comprise the 15-meter mast and must accompany it whenever it is transferred or turned in. The referenced illustrations will help you identify these items.

b. Section III. Basic Issue Items. These are the minimum essential items required to install the 15-meter mast, to operate it, and to perform emergency repairs. These items must accompany the 15-meter mast during its operation and whenever it is transferred between accountable officers. The referenced illustrations will assist you with hard-to-identify items. This manual is your authority to requisition replacement basic issue items based on TOE/MTOE authorization of the end item.

C-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. National Stock Number. Indicates the National stock number assigned to the item and which will be used for requisitioning.

c. Description. Indicates the Federal item name and, if required, a minimum description to identify the item. The part number indicates the primary number used by the manufacturer, 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. Following the part number, the Commercial and Government Entity Code (CAGEC) (5 digits) is shown in parentheses.

d. Location. The physical location of each item listed is given in this column. The lists are designed to inventory all items in one area of the major item before moving on to an adjacent area.

e. Usable on Code. Not applicable.

f. Quantity Requred (Qty Reqd). This column lists the quantity of each item required for a complete major item.

g. Quantity. This column is left blank for use during an inventory. Under the RCVD column, list the quantity you actually receive on your major item. The DATE columns are for your use when you inventory the major item.

SECTION II INTEGRAL COMPONENTS OF END ITEM

(1) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO.	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION PART NUMBER	CAGE	(4) LOCATION	(5) USABLE ON CODE	(6) QTY REQD	(7) QUANTITY RCVD	DATE
1-2		5985-01-248-4760	15M MAST ASS'Y, AB-1339/G 02-2731217-2	(67032)					
			CONSISTING OF:						
			15M TELESCOPIC MAST 556505	(OAM23)			1		
			15M MAST STAY ACCESSORIES KIT 556508	(OAM23)					
			CONSISTING OF:						
2-2	A	5985-01-254-9560	STAY W/WINDER, 10M (BLACK) 559380	(OAM23)			4		
2-2	A	5985-01-254-9561	STAY W/WINDER, 15M (BLUE) 559381	(OAM23)			4		
2-2	A	5985-01-254-9562	STAY W/WINDER, 20M (RED) 559382	(OAM23)			4		
2-2	B	5895-01-326-7685	BASEPLATE 556511	(OAM23)			1		
2-2	C	4030-01-266-3017	GROUND SPIKE 552488	(OAM23)			2		
2-2	D	5985-01-264-2764	ANCHOR STAY 558027	(OAM23)			8		
2-2	F	3040-01-258-0994	TURNING LEVER 551447	(OAM23)			1		
2-2	H	5985-01-254-9557	WINCH 559365	(OAM23)			1		
2-2	I	5985-01-264-2753	EXTENSION TUBE, 40-MM OD 556490	(OAM23)			1		
2-2	J	5985-01-314-8996	EXTENSION TUBE, 50-MM OD 556489	(OAM23)			1		
2-2	E	4030-01-260-4873	SPIKE (YELLOW) 551448	(OAM23)			1		

SECTION II INTEGRAL COMPONENTS OF END ITEM

(1) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO.	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION PART NUMBER	CAGE	(4) LOCATION	(5) USABLE ON CODE	(6) QTY REQD	(7) QUANTITY RCVD	DATE
2-2	G	4020-01-260-4912	MEASURING ROPE 554362	(OAM23)			1		
2-2	K	5985-01-307-9462	ACCESSORY BAG 556268	(OAM23)			1		
			CONTENTS LIST 556255	(OAM23)			1		

APPENDIX E

EXPENDABLE SUPPLIES AND MATERIALS LIST

Section I. INTRODUCTION

E-1. SCOPE.

This appendix lists expendable supplies and materials you will need to operate and maintain the Mast, Antenna, 15-Meter AB-1339/G (15-Meter Mast). These items are authorized to you by CTA 50-970, Expendable Items (Except Medical, Class V, Repair Parts, and Heraldic Items).

E-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.

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 part number followed by the Commercial and Government Entity (CAGE) code in parentheses, if applicable.

e. Column 5 - Unit of Measure (U/M). Indicates the measure used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea, in, pr). If the unit of measure differs from the unit of issue, requisition the lowest unit of issue that will satisfy your requirements.

(1) ITEM NO.	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION PART NO. AND CAGE	(5) UNIT OF MEAS.
1	O	6850-00-105-3084	CLEANING COMPOUND, TRICHLOROTRIFLUORETHANE MIL-C-81302 (80244)	16 OZ
2	O	9150-00-935-1017	SILICONE GREASE MIL-G-10924 (81349)	PT
3	O	7920-00-965-4960	CLOTH, CLEANING CCC-C-444 (81348)	EA
4	O	8030-01-104-5392	SEALING, COMPOUND 10CC MIL-S-46163 (81349)	BT
5	O	9150-01-040-2236	LUBRICATING OIL, ENGINE	1 LITER

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

Section I. INTRODUCTION

F-1. Scope.

This appendix lists and authorizes spares and repair parts; special tools; special test, measurement, and diagnostic equipment (TMDE); and other special support equipment required for performance of unit maintenance of the AB-1339/G. It authorizes the requisitioning, issue, and disposition of spares, repair parts and special tools as indicated by the source, maintenance and recoverability (SMR) codes.

F-2. General.

This Repair Parts and Special Tools List (RPSTL) is divided into the following sections:

a. Section II. Repair Parts List. A list of spares and repair parts authorized by this RPSTL for use in the performance of maintenance. The list also includes parts which must be removed for replacement of the authorized parts. Parts lists are composed of functional groups in ascending numeric sequence, with the parts in each group listed in ascending item number sequence. Figure numbers are listed directly beneath the group header.

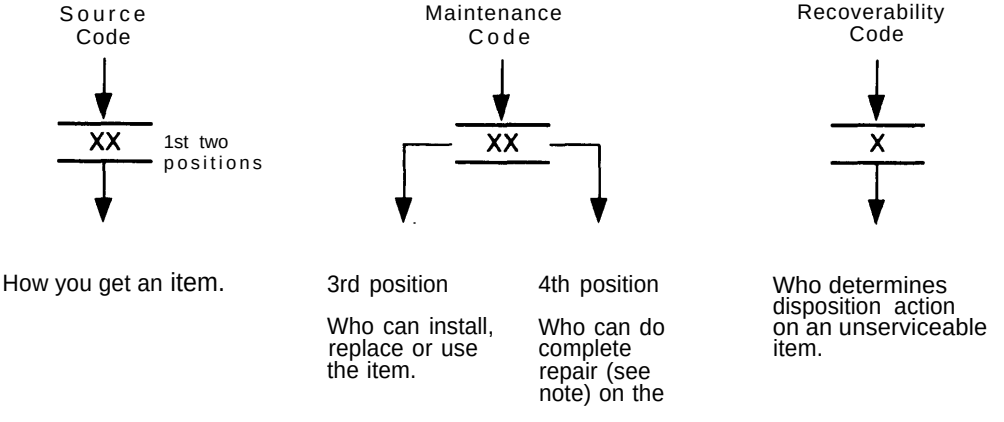
b. Section Ill. Special Tools List. Not applicable.

c. Section IV. Cross-Reference Indexes. A list, in National item identification number (NIIN) sequence, of all National stock numbered items appearing in the listing, followed by a list in alphanumeric sequence of all part numbers appearing in the listings. National stock numbers and part numbers are cross-referenced to each illustration figure and item number appearance. The figure number and item number index lists figure and item numbers in numeric sequence and cross-references National stock number, Commercial and Government Entity Code (CAGEC) and part numbers.

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

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

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



NOTE

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

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

Code	Explanation
PA PB PC PD PE PG	Stocked items; use the applicable NSN to request/requisition items with these source codes They are authorized to the category indicated by the code entered in the third position of the SMR code. NOTE Items coded PC are subject to deterioration.
KD KF KB	Items with these codes are not to be requested/requisitioned individually. They are part of a kit which is authorized to the maintenance category indicated in the third position of the SMR code. The complete kit must be requisitioned and applied.
MO - Made at org AVUM category MF - Made at DS/ AVIM category MH - Made at GS category ML - Made at Specialized Repair Activity (SRA) MD - Made at Depot	Items with these codes are not to be requested/requisitioned individually. They must be made from bulk material which is identified by the part number in the description and usable on code (UOC) column and listed in the Bulk Material group of the repair parts list. If the item is authorized to you by the third postion code of the SMR code, but the source code indicates it is made at a higher category, order the item from the higher category of maintenance.
AO - Assembled org/AVUM category AF - Assembled by DS/AVIM category AL - Assembled by SRA AD - Assembled by Depot	Items with these codes are not to be requested/requisitioned individuality. The parts that make up the assembled item must be requisitioned or fabricated and assembled at the category of maintenance indicated by the source code. If the third postition code of the SMR code authorizes you to replace the item, but the source code indicates the item is assembled at a higher category, order the item from the higher category of maintenance.

Code *Explanation*

XA - Do not requisition an "XA" coded item. Order its next higher assembly.
XB - If an "XB" item is not available from salvage, order it using CAGEC and part number given.
XC - Installation drawing, diagram, instruction sheet, field service drawing that is identified by manufacturers part number.
XD - Item is not stocked. Order an "XD" coded item through normal supply channels using the CAGEC and part number given, if no NSN is available.

NOTE

Cannibalization or controlled exchange, when authorized, may be used as a source of supply for items with the above source codes, except for those source coded "XA" or those aircraft support items restricted by requirements of AR 750-1.

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

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

Code *Application/Explanation*

C - Crew or operator maintenance done within organizational or aviation unit maintenance.
O - Organizational or aviation unit category can remove, replace, and use the item.
F - Direct support or aviation intermediate category can remove, replace, and use the item.
H - General support category can remove, replace, and use the item.
L - Specialized repair activity can remove, replace, and use the item.
D - Depot category can remove, replace, and use the item.

(b) The maintenance code entered in the fourth position tells whether or not the item is to be repaired and identifies the lowest maintenance category with the capability to do complete repair (i.e., perform all authorized repair functions). This position will contain one of the following maintenance codes.

NOTE

Some limited repair may be done on the item at a lower category of maintenance, if authorized by the Maintenance Allocation Chart (MAC) and SMR codes.

Code *Application/Explanation*

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

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

Recoverability Codes — *Application/Explanation*

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

c. CAGEC (Column (3)). The Commercial and Government Entity Code CAGEC is a 5-digit numeric code which is used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

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

NOTE

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

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

(1) The Federal Item name and, when required, a minimum description to identify the item.

(2) Usable on Code when applicable (para F-5).

(3) The statement “END OF FIGURE” appears just below the last item description in Column (5) for a given figure in both sections II and Ill.

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

F-4. Explanation of Columns (Section IV).

a. National Stock Number NSN Index.

(1) *Stock number column.* This column lists the NSN by National item identification number (NIIN) sequence. The NIIN consists of the last nine digits of the NSN When using this column to locate an item, ignore the first four digits of the NSN When requisitioning items, use the complete NSN (13 digits).

(2) *Fig. column.* This column lists the number of the figure where the item is identified/located. The illustrations are in numerical sequence in sections II and Ill.

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

b. Part Number Index. Part numbers in this index are listed by part number in ascending alphanumeric sequence.

(1) *CAGEC column.* This column lists the Commercial and Government Entity Code CAGEC

(2) *Part number column.* This column indicates the part number assigned to the item.

(3) *Stock number column.* This column lists the National stock number for the associated part number and manufacturer identified in the part number and CAGEC columns to the left.

(4) *Fig. column.* This column lists the number of the figure where the item is identified/located in sections II and Ill.

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

c. Figure and Item Number Index.

(1) *Fig. column.* This column lists the number of the figure where the item is identified/located in sections II and Ill.

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

(3) *Stock number column.* This column lists the National stock number for the item.

(4) *CAGEC column.* The Commercial and Government Entity Code CAGEC is a 5-digit numeric code used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

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

F-5. Special Information.

National stock numbers (NSNs) that are missing from P source coded items have been applied for and will be added to this TM by future change/revision when they are entered in the Army Master Data File (AMDF). Until the NSNs are established and published, submit exception requisitions to: Commander, US Army Communications-Electronics Command and Fort Monmouth, ATTN: AMSEL-LC-LM, Fort Monmouth, New Jersey 07703-5007 for the part required to support your equipment.

F-6. How to Locate Repair Parts.

a. When National stock number or part number is not known.

(1) *First.* Using the table of contents; determine the assembly group or subassembly group to which the item belongs. This is necessary since figures are prepared for assembly groups and subassembly groups, and listings are divided into the same groups.

(2) *Second.* Find the figure covering the assembly group or subassembly group to which the item belongs.

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

(4) *Fourth.* Refer to the Repair Parts List for the figure to find the part number for the item number noted on the figure.

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

b. When National stock number or part is known.

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

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

F-7. Abbreviations.

Not applicable.

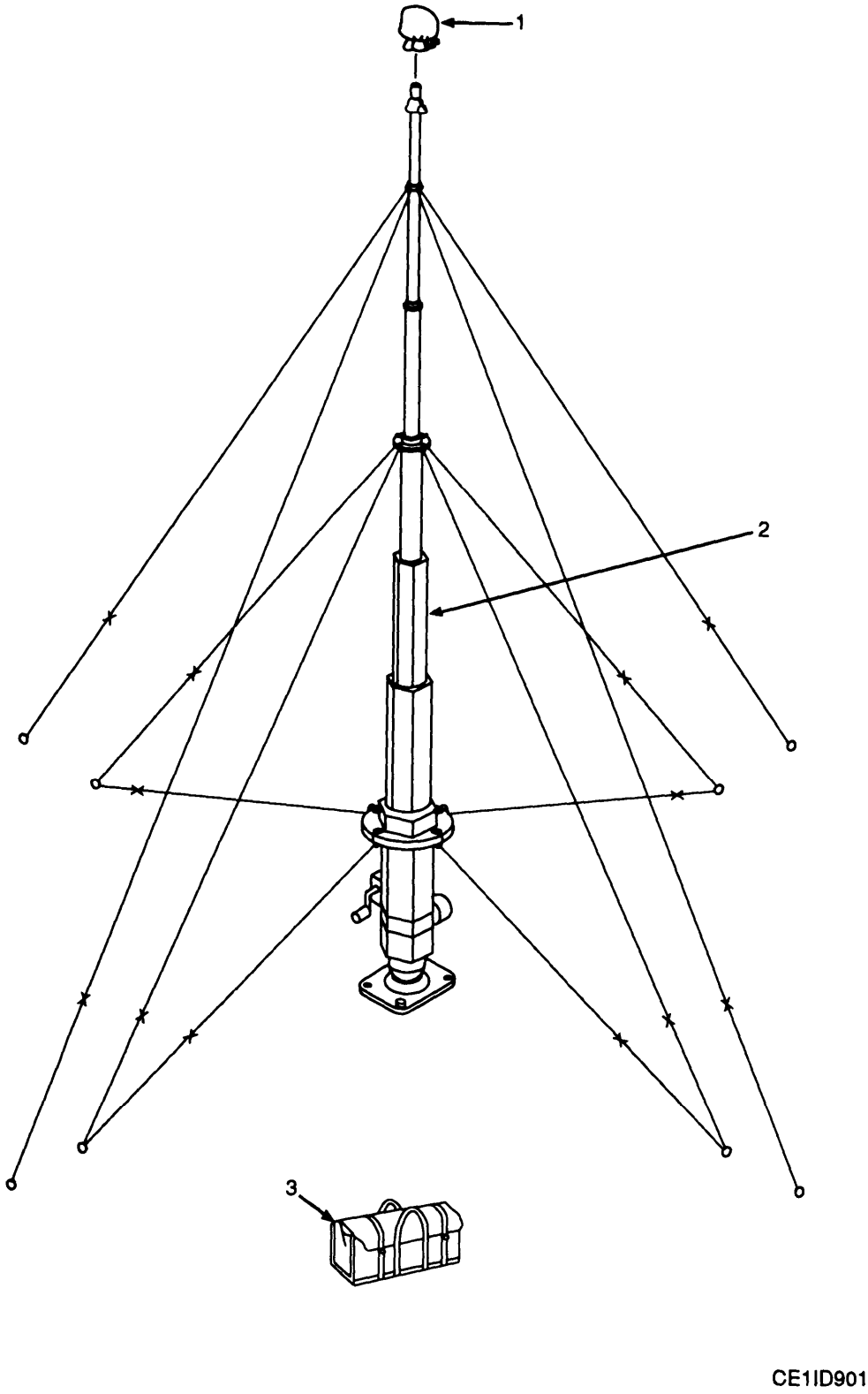


Figure F-1. Mast, Antenna 15 Meter AB-1339/G

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 00 MAST,ANTENNA 15 METER AB-1339/G	
				FIGURE F-1	
1	PAOZZ	0AM23	559379	CAP,MASTHEAD	1
2	PAODA	0AM23	556505	MAST	1
3	PAOOO	0AM23	556508	ACCESSORY KIT,COMM	1
				END OF FIGURE	

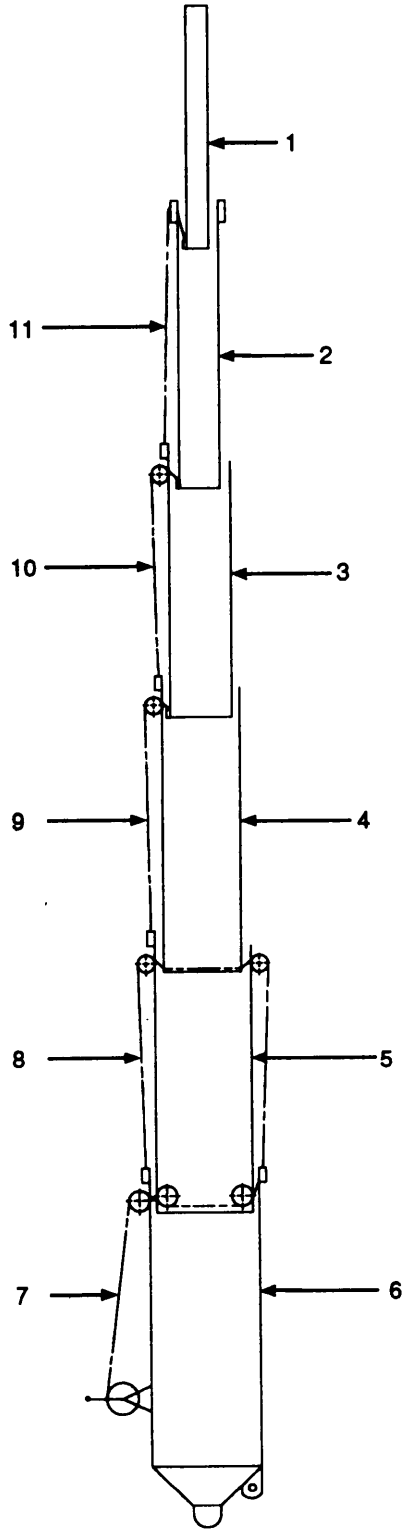


Figure F-2. Mast, Telescopic

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 01 MAST TELESCOPIC	
				FIGURE F-2	
1	PAODA	67032	556509	MAST SECTION 6	1
2	PAODA	67032	559674	MAST ASSY SECTION 5	1
3	PAODA	67032	556147	MAST ASSY SECTION 4	1
4	PAODA	67032	556373	MAST SECTION 3	1
5	PAODA	67032	556145	MAST SECTION 2	1
6	PAODA	67032	556144	MAST ASSY SECTION 1	1
7	PAOZZ	0AM23	559827	ROPE,FIBROUS	1
8	PAOZZ	0AM23	559828	ROPE,FIBROUS	1
9	PAOZZ	0AM23	559829	ROBE,FIBROUS	1
10	PAOZZ	0AM23	559830	ROPE,FIBROUS	1
11	PAOZZ	0AM23	559831	ROPE,FIBROUS	1
				END OF FIGURE	

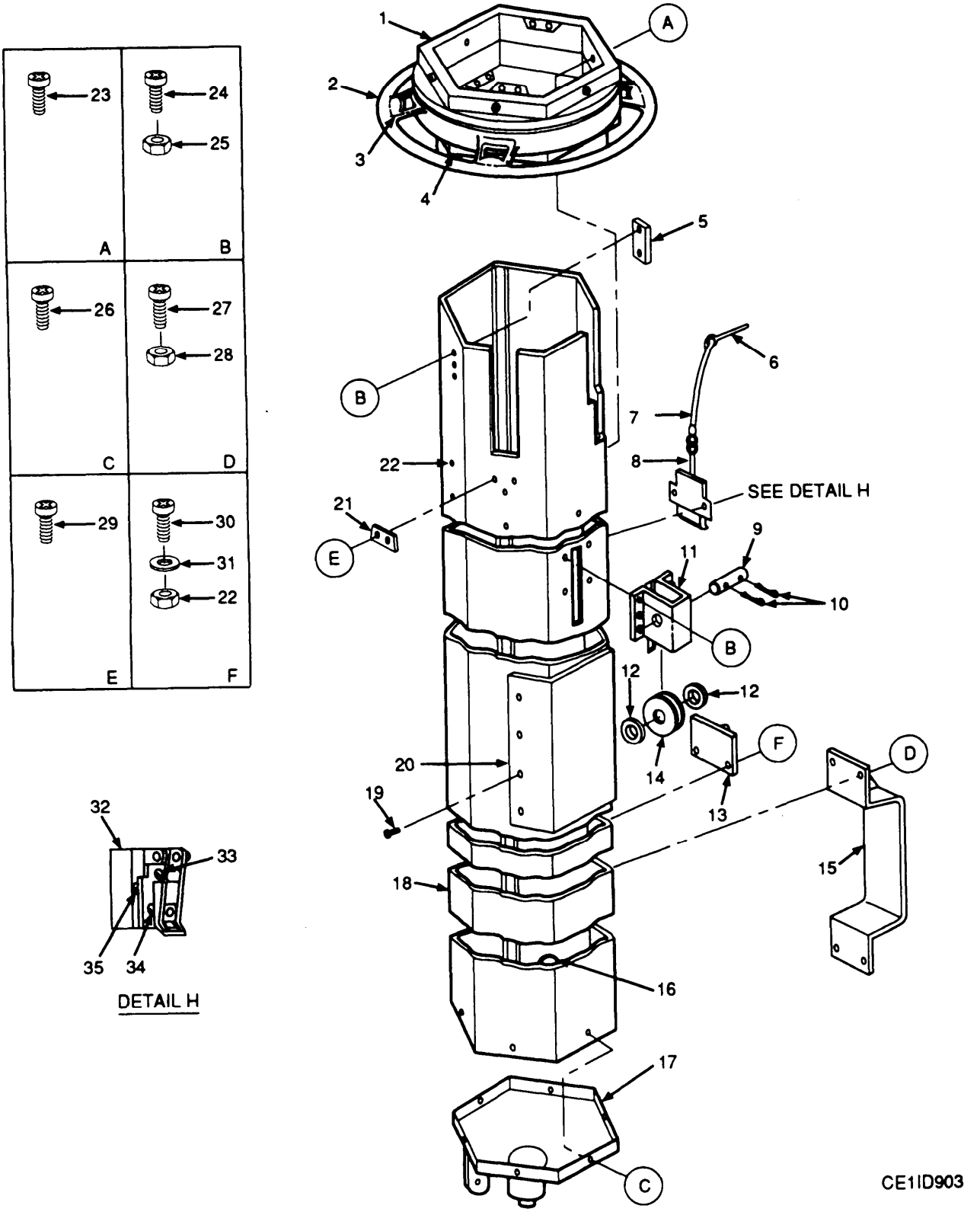


Figure F-3. Mast Section 1

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 0101 MAST SECTION 1	
				FIGURE F-3	
1	PAOZZ	0AM23	558904	RING,SUPPORT	1
2	PAOZZ	0AM23	558909	RING,STAY	1
3	PAOZZ	0AM23	559658	STAKE,GUY	4
4	PAOZZ	0AM23	558903	RING SUPPORT	1
5	PAOZZ	0AM23	559014	CLEAT,STOP	1
6	PAOZZ	0AM23	617289	PIN,STRAIGHT,HEADLE	1
7	PAOZZ	0AM23	558953	SUPPORT,ANTENNA	1
8	PAOZZ	0AM23	611290	LOCK,MAST	1
9	PAOZZ	0AM23	559142	SHAFT,STRAIGHT	1
10	PAOZZ	0AM23	617248	PIN,SPLIT	2
11	PAOZZ	0AM23	559213	HOUSING,PULLY	1
12	PAOZZ	0AM23	559834	WASHER,WEAR	2
13	PAOZZ	0AM23	558902	INSULATION SLEEVING	1
14	PAOZZ	0AM23	558923	PULLEY	1
15	PAOZZ	0AM23	556341	HANDLE,ANTENNA	1
16	PAOZZ	0AM23	559932	PLUG,EXHAUST	1
17	PAOZZ	0AM23	558893	BASE,MAST	1
18	PAOZZ	0AM23	556311	MAST SECTION	1
19	PAOZZ	0AM23	900866	RIVET,BLIND	11
20	PAOZZ	0AM23	558901	BRACKET,WINCH	1
21	PAOZZ	0AM23	558900	CLAMP	3
22	PAOZZ	0AM23	900042	NUT,INSERT	11
23	PAOZZ	0AM23	622723	SCREW,MACHINE	9
24	PAOZZ	0AM23	900573	SCREW,MACHINE	9
25	PAOZZ	0AM23	556164	NUT	2
26	PAOZZ	0AM23	900572	SCREW,MACHINE	4
27	PAOZZ	0AM23	900057	SCREW,MACHINE	4
28	PAOZZ	0AM23	900055	NUT,INSERT	4
29	PAOZZ	0AM23	901108	SCREW,MACHINE	6
30	PAOZZ	0AM23	622722	SCREW,MACHINE	2
31	PAOZZ	0AM23	625055	WASHER,SPECIAL	2
32	PAOZZ	0AM23	556411	SPACER	1
33	PAOZZ	0AM23	901048	SCREW,MACHINE	1
34	PAOZZ	0AM23	900501	SCREW,MACHINE	2
35	PAOZZ	0AM23	622976	SCREW,MACHINE	2
				END OF FIGURE	

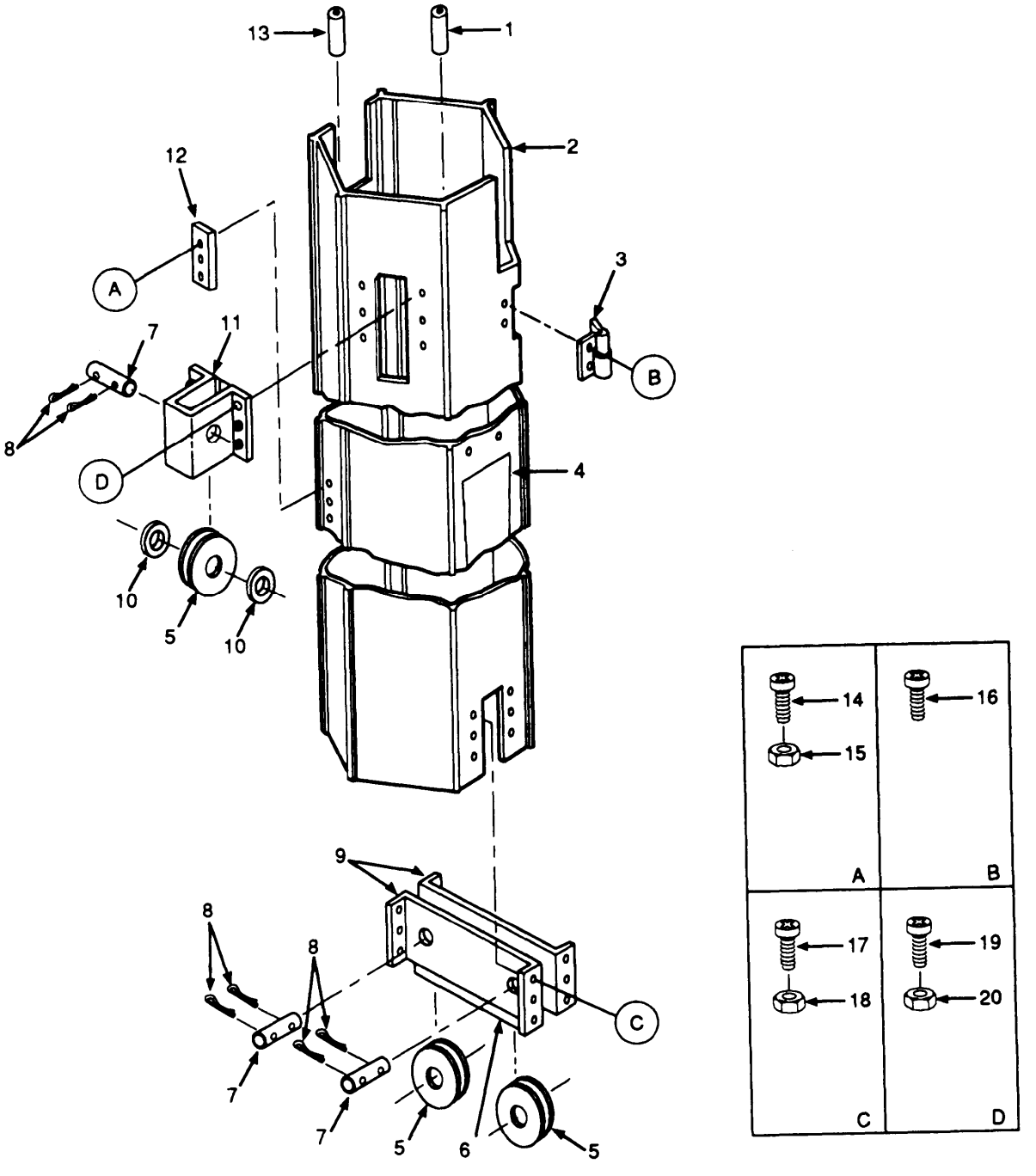


Figure F-4. Mast Section 2

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 0102 MAST SECTION 2	
				FIGURE F-4	
1	PAOZZ	0AM23	558988	GUIDE,PLASTIC	3
2	PAOZZ	0AM23	556312	MAST SECTION	1
3	PAOZZ	0AM23	556446	CLIP,ROPE	1
4	PAOZZ	0AM23	556264	TAPE,MARK	3
5	PAOZZ	0AM23	558923	PULLEY	4
6	PAOZZ	0AM23	558907	HOUSING	1
7	PAOZZ	0AM23	559142	SHAFT,STRAIGHT	4
8	PAOZZ	0AM23	617248	PIN,SPLIT	8
9	PAOZZ	0AM23	558906	YOKE,PULLEY	2
10	PAOZZ	0AM23	559834	WASHER,WEAR	4
11	PAOZZ	0AM23	559205	HOUSING,PULLEY	2
12	PAOZZ	0AM23	559015	CLEAT,STOP	1
13	PAOZZ	OAM23	558972	GUIDE,PLASTIC	3
14	PAOZZ	0AM23	900311	SCREW,MACHINE	3
15	PAOZZ	0AM23	900021	NUT,INSERT	7
16	PAOZZ	0AM23	900065	SCREW,MACHINE	4
17	PAOZZ	0AM23	900040	SCREW,MACHINE	12
18	PAOZZ	0AM23	558323	NUT	4
19	PAOZZ	0AM23	900573	SCREW,MACHINE	12
20	PAOZZ	0AM23	559208	NUT	4
				END OF FIGURE	

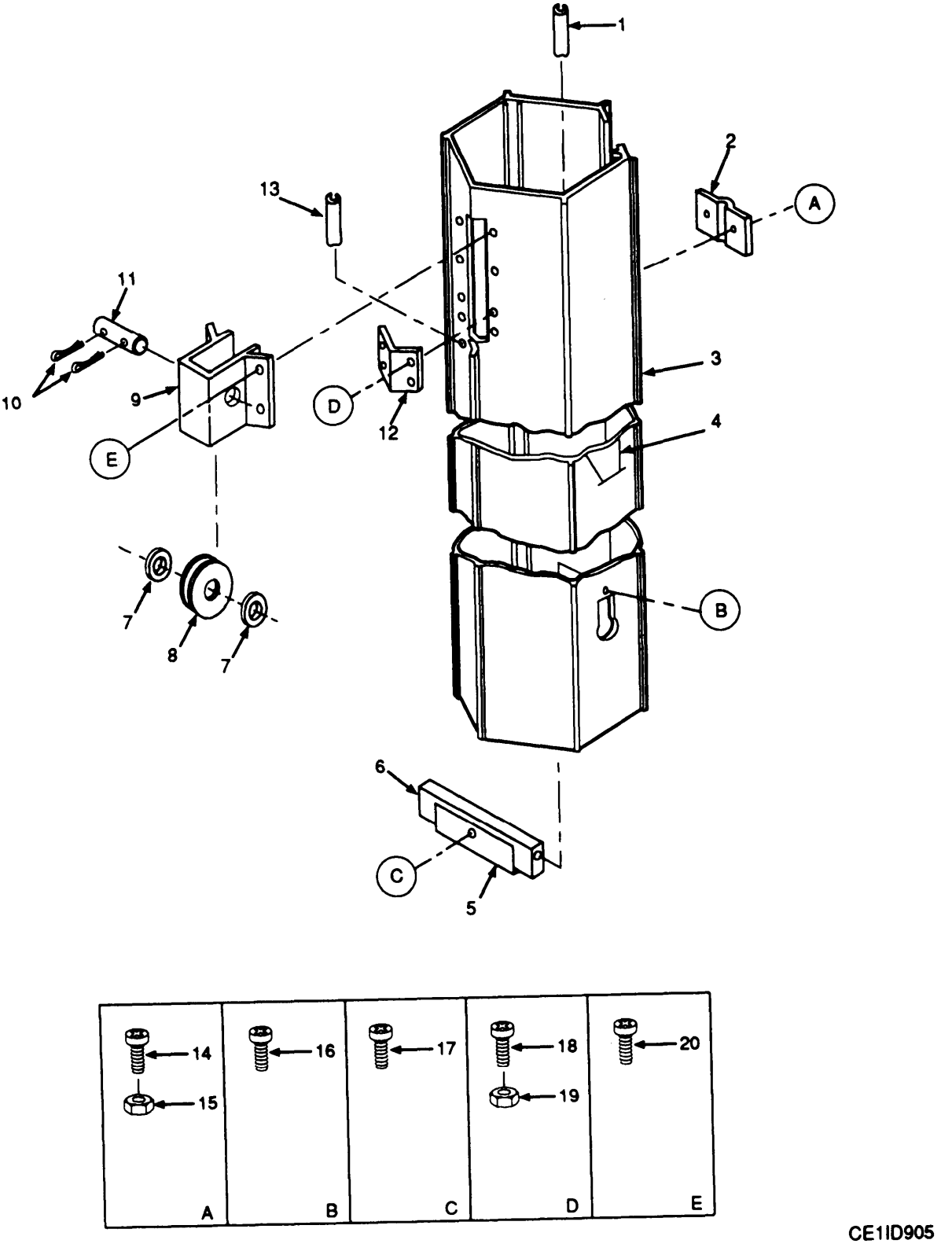


Figure F-5. Mast Section 3

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 0103 MAST SECTION 3	
				FIGURE F-5	
1	PAOZZ	0AM23	558988	GUIDE,PLASTIC	3
2	PAOZZ	0AM23	556443	CLIP,RETAINING	1
3	PAOZZ	0AM23	556313	MAST	1
4	PAOZZ	0AM23	556264	TAPE,MARK	3
5	PAOZZ	0AM23	558922	COVER	1
6	PAOZZ	0AM23	558920	YOKE	1
7	PAOZZ	0AM23	559834	WASHER,WEAR	2
8	PAOZZ	0AM23	558923	PULLEY	1
9	PAOZZ	0AM23	559206	HOUSING,PULLEY	1
10	PAOZZ	0AM23	617248	PIN,SPLIT	2
11	PAOZZ	0AM23	559142	SHAFT,STRAIGHT	1
12	PAOZZ	0AM23	558268	BRIDGE	1
13	PAOZZ	0AM23	558972	GUIDE,PLASTIC	3
14	PAOZZ	0AM23	622721	SCREW ASSORTMENT	4
15	PAOZZ	0AM23	900042	NUT,INSERT	4
16	PAOZZ	0AM23	900311	SCREW,MACHINE	2
17	PAOZZ	0AM23	900312	SCREW,MACHINE	1
18	PAOZZ	0AM23	622709	SCREW,MACHINE	4
19	PAOZZ	0AM23	556080	NUT	2
20	PAOZZ	0AM23	900573	SCREW,MACHINE	8
				END OF FIGURE	

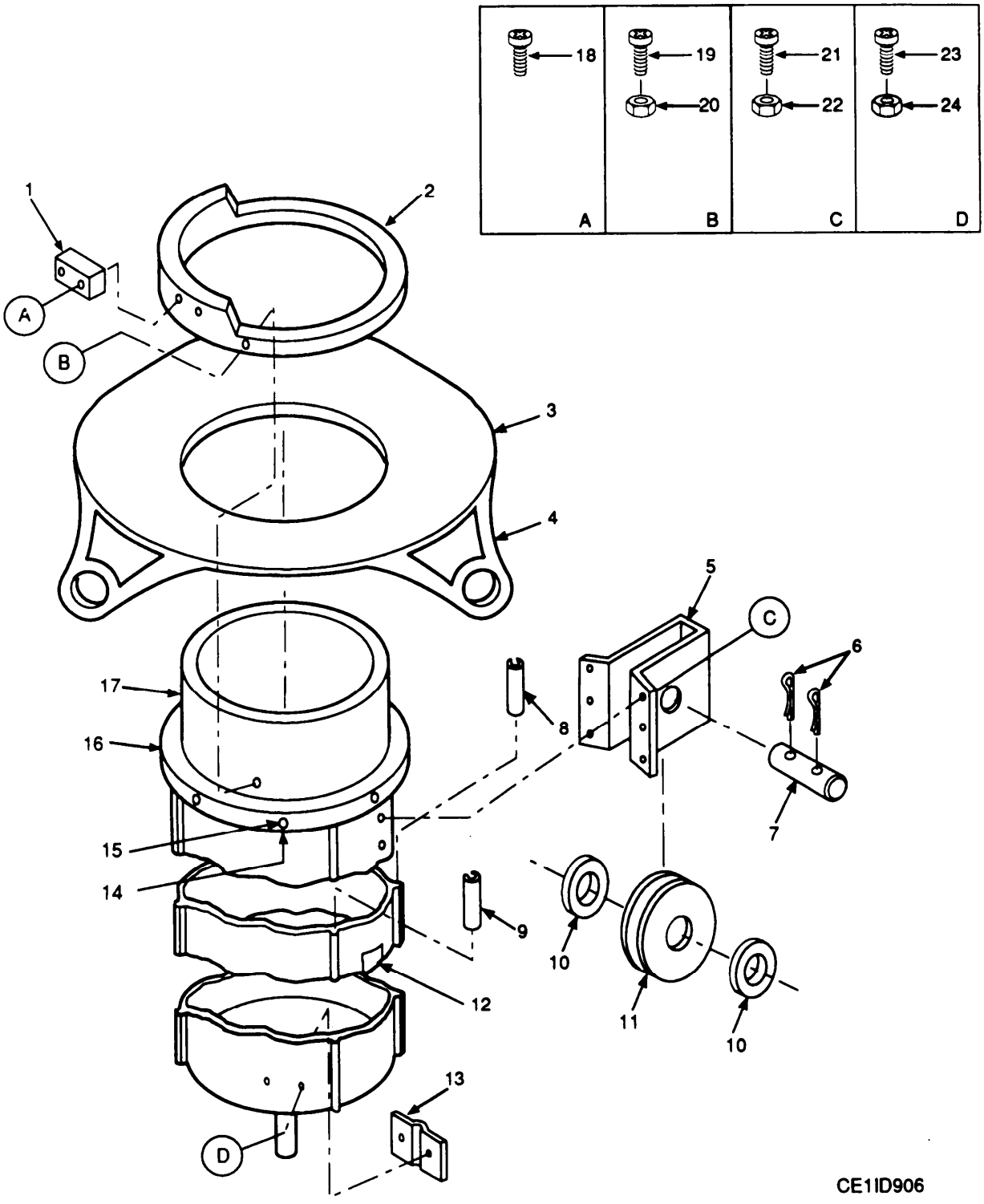
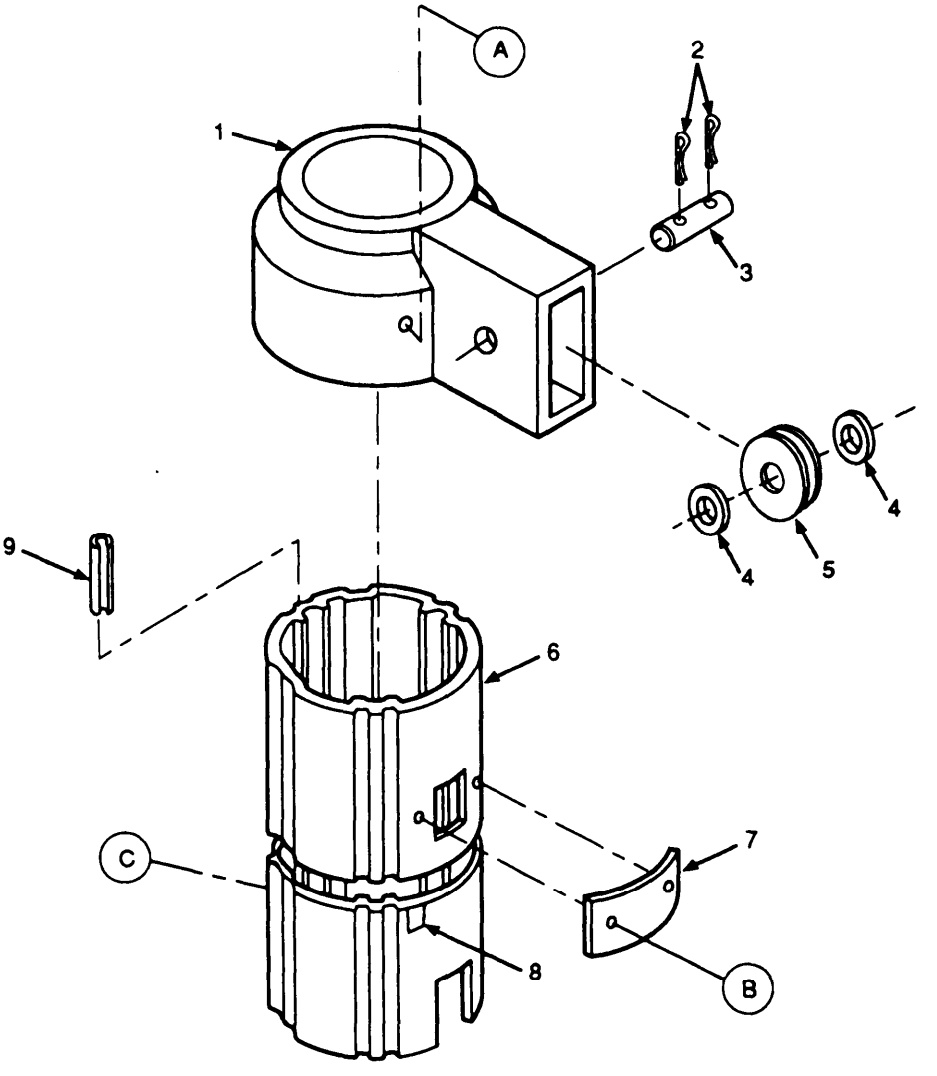


Figure F-6. Mast Section 4

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 0104 MAST SECTION 4	
				FIGURE F-6	
1	PAOZZ	0AM23	558900	CLAMP	1
2	PAOZZ	0AM23	558927	RING,SUPPORT	1
3	PAOZZ	0AM23	558928	PROTECTOR,GUY	1
4	PAOZZ	0AM23	559657	MARKING,STAY	4
5	PAOZZ	0AM23	559207	HOUSING,PULLEY	1
6	PAOZZ	0AM23	617248	PIN,SPLIT	2
7	PAOZZ	0AM23	559142	SHAFT,STRAIGHT	1
8	PAOZZ	0AM23	558972	GUIDE,PLASTIC	2
9	PAOZZ	0AM23	558988	GUIDE,PLASTIC	3
10	PAOZZ	0AM23	559834	WASHER,WEAR	2
11	PAOZZ	0AM23	558923	PULLEY	1
12	PAOZZ	0AM23	556376	MARK,TAPE	3
13	PAOZZ	0AM23	558929	CLIP,RETAINING	1
14	PAOZZ	0AM23	900408	WASHER	6
15	PAOZZ	0AM23	900740	RIVET,BLIND	6
16	PAOZZ	0AM23	558925	RING,SUPPORT	1
17	PAOZZ	0AM23	556347	MAST SECTION	1
18	PAOZZ	0AM23	901108	SCREW,MACHINE	2
19	PAOZZ	0AM23	622723	SCREW,MACHINE	3
20	PAOZZ	0AM23	900042	NUT,INSERT	3
21	PAOZZ	0AM23	900040	SCREW,MACHINE	6
22	PAOZZ	0AM23	559208	NUT	2
23	PAOZZ	0AM23	900501	SCREW,MACHINE	2
24	PAOZZ	0AM23	900300	NUT,SPECIAL	2
				END OF FIGURE	



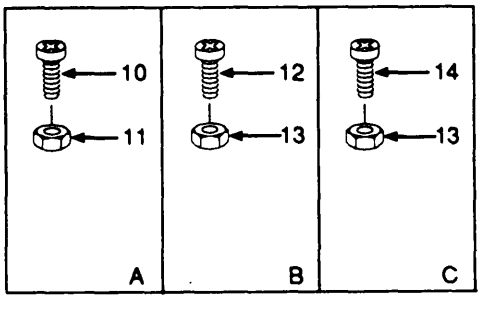


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Figure F-7. Mast Section 5

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 0105 MAST SECTION 5	
				FIGURE F-7	
1	PAOZZ	0AM23	558930	HOUSING,PULLEY	1
2	PAOZZ	0AM23	900058	PIN,SPLIT	2
3	PAOZZ	0AM23	558932	SHAFT,STRAIGHT	1
4	PAOZZ	0AM23	559686	WASHER,WEAR	2
5	PAOZZ	0AM23	558931	PULLEY	1
6	PAOZZ	0AM23	556348	MAST SECTION	1
7	PAOZZ	0AM23	559685	STEERINGHEAD	1
8	PAOZZ	0AM23	556376	MARK,TAPE	3
9	PAOZZ	0AM23	558988	GUIDE,PLASTIC	3
10	PAOZZ	0AM23	622723	SCREW,MACHINE	3
11	PAOZZ	0AM23	900042	NUT,INSERT	3
12	PAOZZ	0AM23	900065	SCREW,MACHINE	2
13	PAOZZ	0AM23	900021	NUT,INSERT	3
14	PAOZZ	0AM23	622709	SCREW,MACHINE	1
				END OF FIGURE	

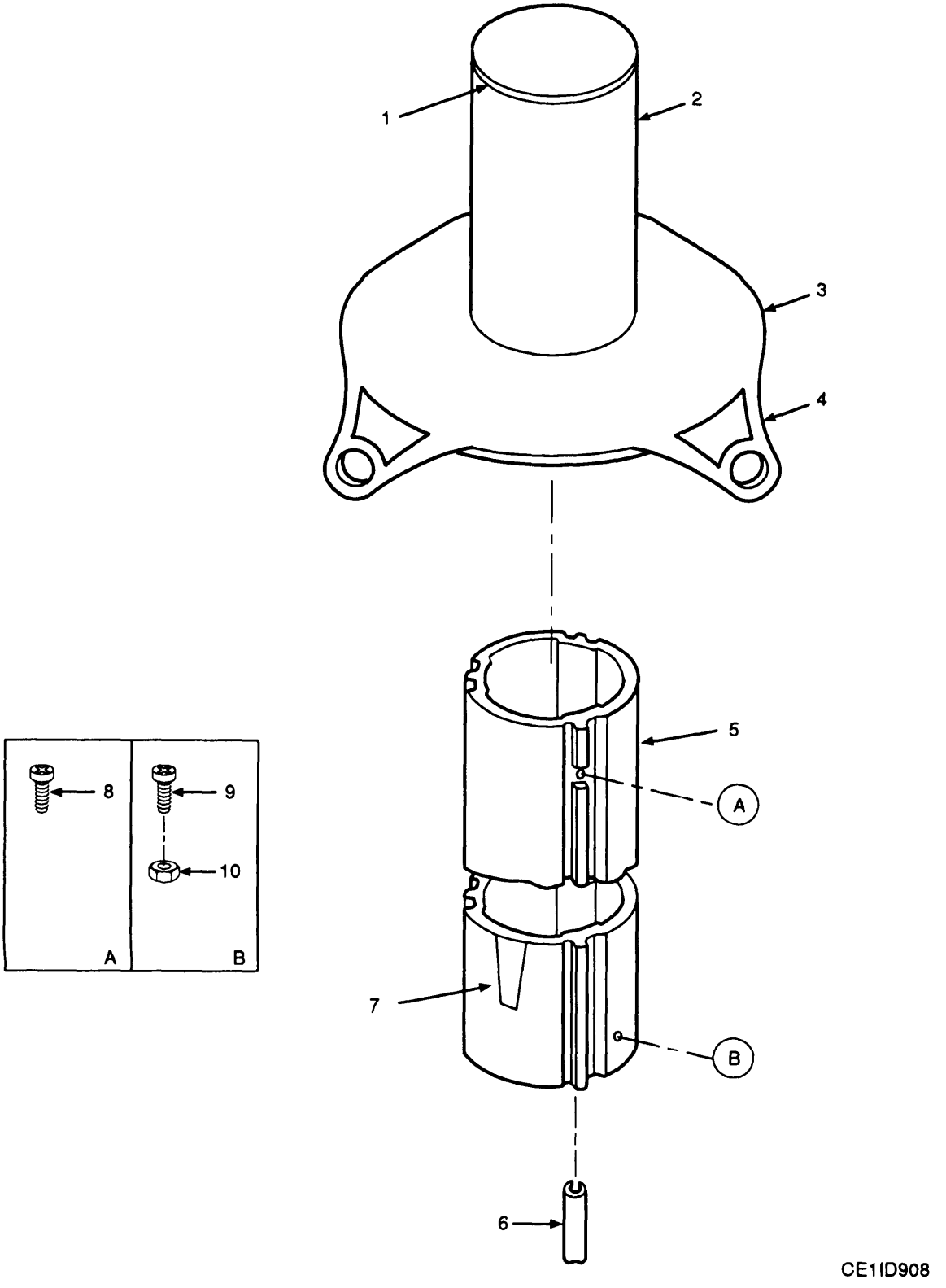


Figure F-8. Mast Section 6

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 0106 MAST SECTION 6	
				FIGURE F-8	
1	PAOZZ	0AM23	617369	PLUG	1
2	PAOZZ	0AM23	556488	SUPPORT,ANTENNA	1
3	PAOZZ	0AM23	556491	PROTECTOR,GUY	1
4	PAOZZ	67032	559660	STAKE,GUY	4
5	PAOZZ	0AM23	556001	MAST SECTION	1
6	PAOZZ	0AM23	558988	GUIDE,PLASTIC	3
7	PAOZZ	0AM23	556376	MARK,TAPE	3
8	PAOZZ	0AM23	556988	SCREW,MACHINE	3
9	PAOZZ	0AM23	622712	SCREW,MACHINE	1
10	PAOZZ	0AM23	900409	NUT ASSORTMENT	1
				END OF FIGURE	

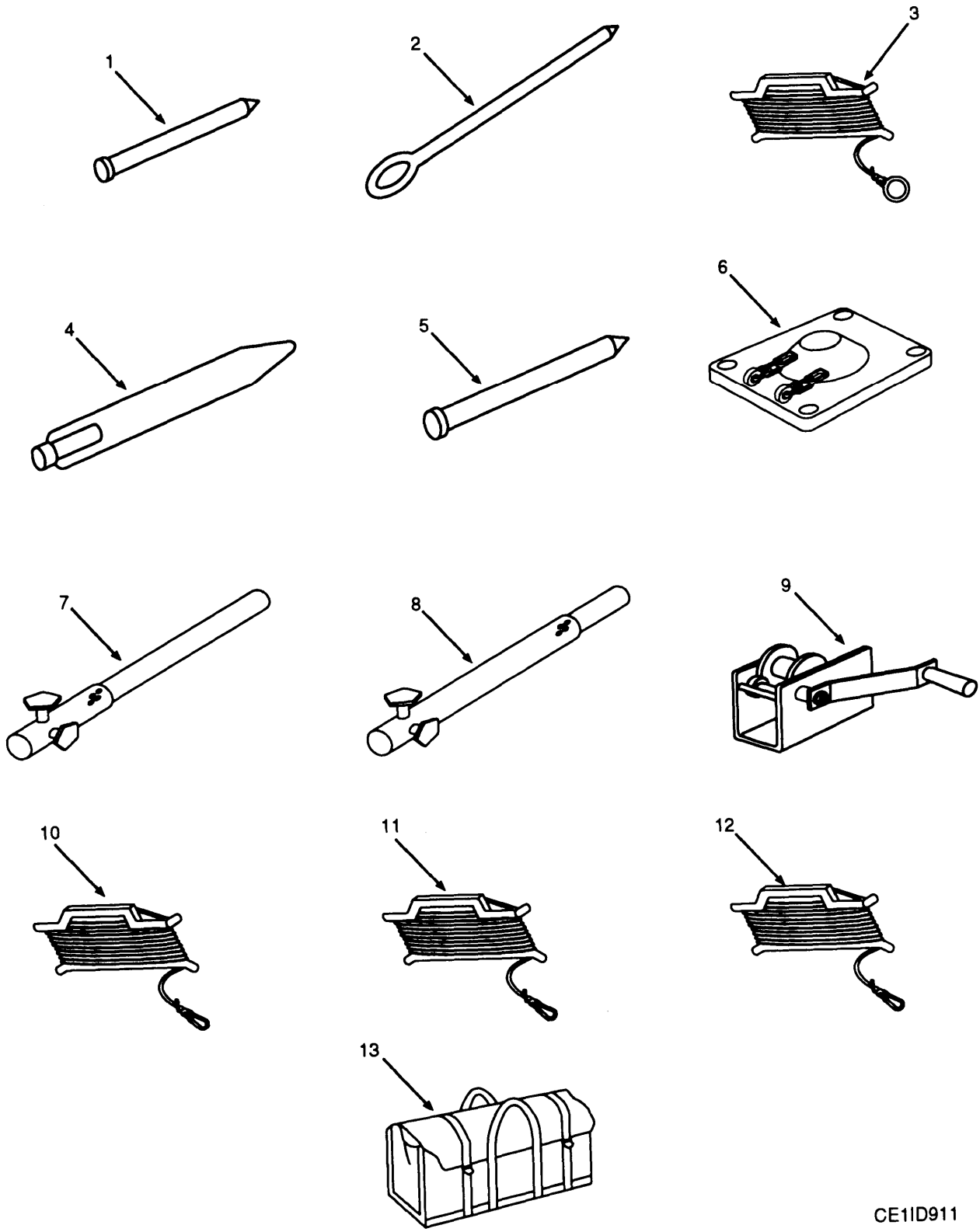
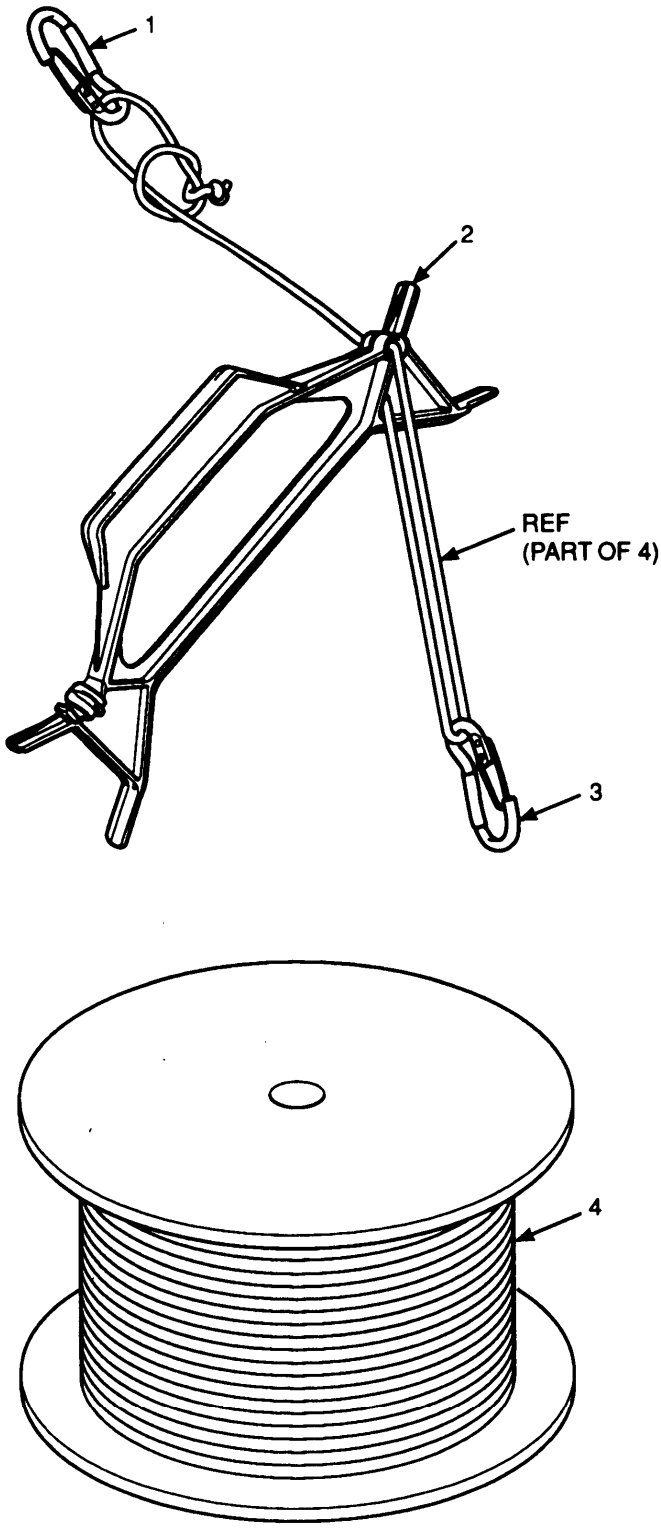


Figure F-9. Accessory Kit, Communications Equipment

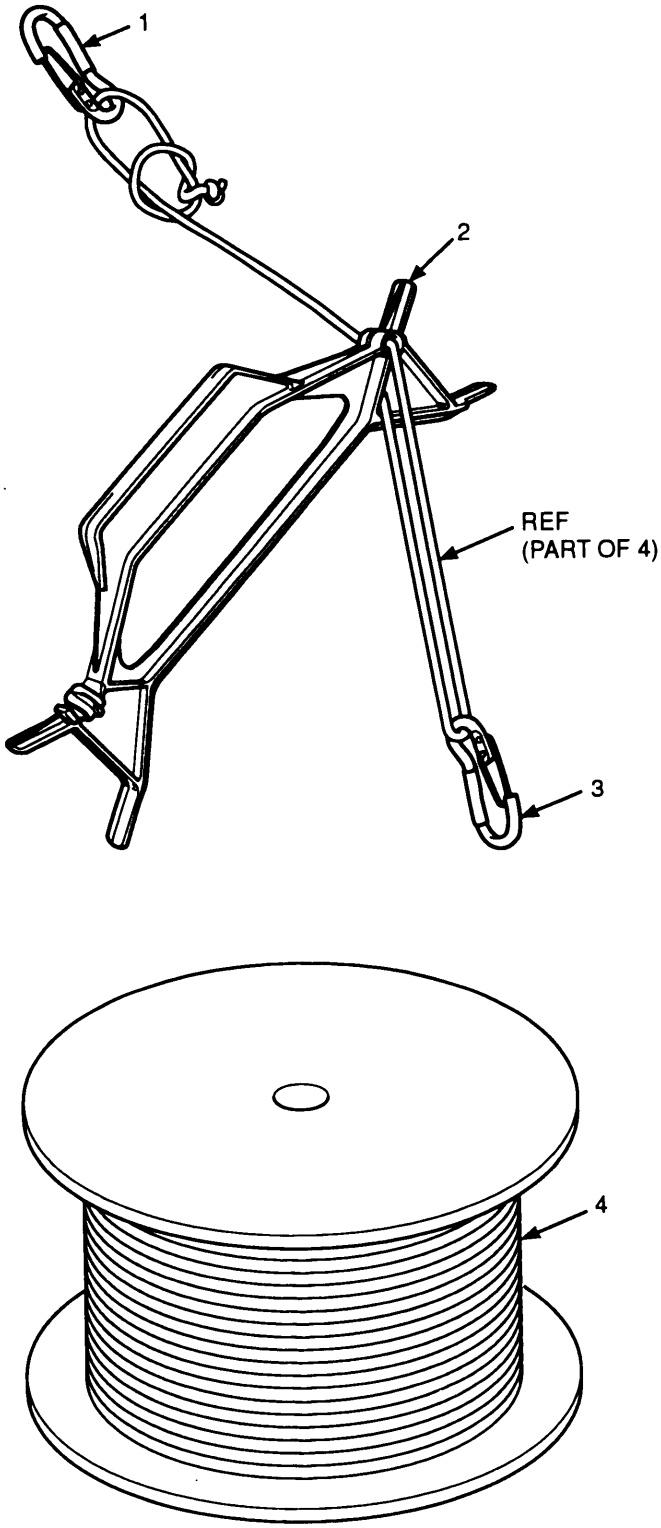
(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 02 COMMUNICATIONS EQUIPMENT ACCESSORY KIT	
				FIGURE F-9	
1	PAOZZ	80063	SCC34000	STAKE,GUY	1
2	PAOZZ	0AM23	551447	LEVER,TURNING	1
3	PAOZZ	0AM23	554362	ROPE,FIBROUS	1
4	PAOZZ	14933	558027	SUPPORT,ANTENNA	8
5	PAOZZ	0AM23	552488	STAKE,GUY	2
6	PAOOO	67032	556511	BASE,ANTENNA SUPPOR	1
7	PAODA	0AM23	556490	MAST SECTION	1
8	PAOZZ	0AM23	556489	MAST	1
9	PAODA	67032	559365	WINCH	1
10	PAODA	67032	559380	WINDER STAY ASSY	4
11	PAODA	67032	559381	WINDER STAY ASSY	4
12	PAODA	67032	559382	WINDER STAY ASSY	4
13	PAOZZ	0AM23	556268	BAG	1
				END OF FIGURE	



CE1ID045

Figure F-10. Stay with Winder (10 Meter)

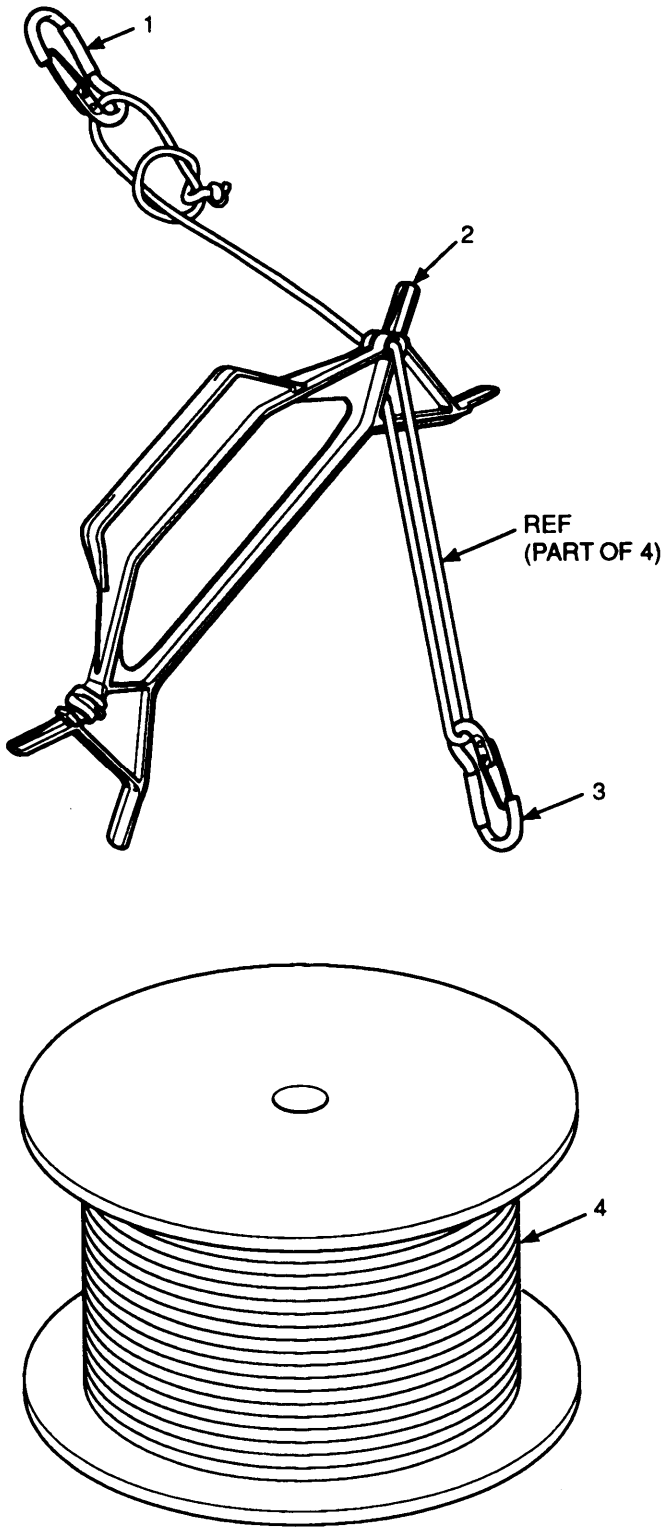
(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 0201 STAY WITH WINDER 10 METER	
				FIGURE F-10	
1	PAOZZ	67032	558358	SNAP HOOK	1
2	PAOZZ	67032	556849	STRETCHER,WIRE	1
3	PAOZZ	67032	900049	SNAP HOOK	1
4	PAOZZ	67032	558797	ROPE,FIBROUS	V
				END OF FIGURE	



CE1ID046

Figure F-11. Stay with Winder (15 Meter)

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 0202 STAY WITH WINDER 15 METER	
				FIGURE F-11	
1	PAOZZ	67032	558357	SNAP HOOK	1
2	PAOZZ	67032	556849	STRETCHER,WIRE	1
3	PAOZZ	67032	900049	SNAP HOOK	1
4	PAOZZ	67032	558797	ROPE,FIBROUS	V
				END OF FIGURE	



CE1ID047

Figure F-12. Stay with Winder (20 Meter)

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 0203 STAY WITH WINDER 20 METER	
				FIGURE F-12	
1	PAOZZ	67032	558360	SNAP HOOK	1
2	PAOZZ	67032	556849	STRETCHER,WIRE	1
3	PAOZZ	67032	900049	SNAP HOOK	1
4	PAOZZ	67032	558797	ROPE,FIBROUS	V
				END OF FIGURE	

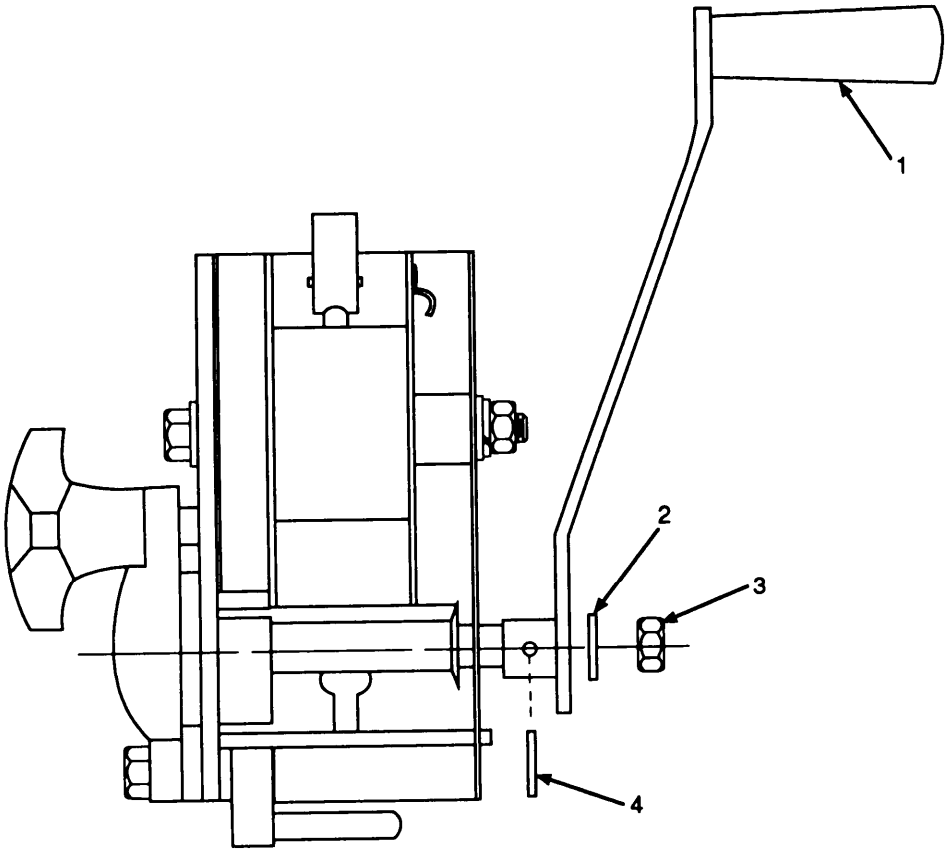


Figure F-13. Winch

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 0204 WINCH	
				FIGURE F-13	
1	PAOZZ	67032	475050	HANDLE	1
2	PAOZZ	0AM23	900623	WASHER,FLAT	1
3	PAOZZ	0AM23	624736	NUT,SELF-LOCKING,HE	1
4	PAOZZ	80205	NAS561-F5-15	PIN	1
				END OF FIGURE	

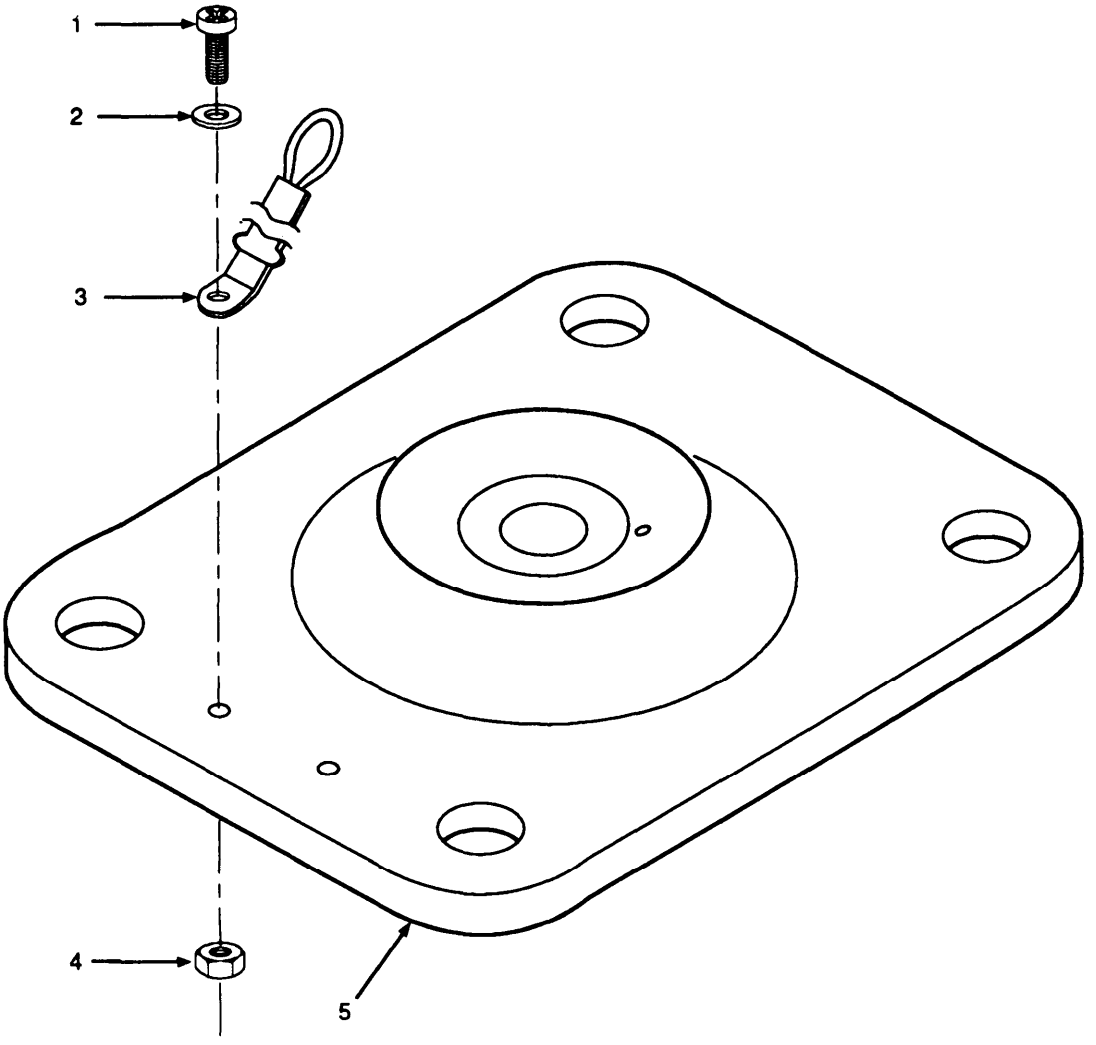


Figure F-14. Baseplate, Antenna Support

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 0205 ANTENNA SUPPORT BASEPLATE	
				FIGURE F-14	
1	PAOZZ	0AM23	900070	SCREW,MACHINE	2
2	PAOZZ	0AM23	624787	WASHER,FLAT	2
3	PAOZZ	0AM23	551439	CHAIN LINK	2
4	PAOZZ	0AM23	900028	NUT,PLAIN,HEXAGON	2
5	PAOZZ	0AM23	558457	BASEPLATE	2
				END OF FIGURE	

CROSS-REFERENCE INDEXES

NATIONAL STOCK NUMBER INDEX

STOCK NUMBER	FIG.	ITEM	STOCK NUMBER	FIG.	ITEM
4030-00-187-5263	F-9	1	5305-01-307-5468	F-3	27
5985-01-254-9557	F-9	9	5305-01-307-5469	F-3	24
5985-01-254-9560	F-9	10		F-4	19
5985-01-254-9561	F-9	11		F-5	20
5985-01-254-9562	F-9	12	5305-01-307-5470	F-3	30
5985-01-254-9563	F-2	6	5305-01-307-5471	F-4	16
5985-01-254-9566	F-2	3		F-7	12
5985-01-254-9567	F-2	2	5305-01-307-5473	F-4	14
3040-01-258-0994	F-9	2		F-5	16
4020-01-260-4908	F-2	7	5305-01-307-5474	F-5	18
4020-01-260-4909	F-2	8		F-7	14
4020-01-260-4910	F-2	9	5305-01-307-5475	F-3	34
4020-01-260-4911	F-2	11		F-6	23
4020-01-260-4912	F-9	3	5305-01-307-5478	F-8	9
5985-01-264-2753	F-9	7	5640-01-307-5480	F-3	13
5985-01-264-2764	F-9	4	5310-01-307-5481	F-8	10
4030-01-266-3017	F-9	5	5305-01-307-5482	F-5	14
4020-01-266-9175	F-2	10	3040-01-307-5485	F-7	3
5340-01-270-5083	F-1	1	5985-01-307-9462	F-9	13
5310-01-296-0203	F-3	22	3020-01-307-9463	F-7	5
	F-5	15	5985-01-307-9464	F-7	7
	F-6	20	5310-01-307-9466	F-3	25
	F-7	11	9330-01-307-9467	F-4	13
5310-01-296-0204	F-3	28		F-5	13
5310-01-296-0205	F-3	31		F-6	8
5310-01-296-0206	F-4	15	9330-01-307-9468	F-4	1
	F-7	13		F-5	1
5310-01-296-0207	F-6	24		F-6	9
5320-01-296-0241	F-3	19		F-7	9
5320-01-296-0242	F-6	15		F-8	6
5985-01-296-0579	F-2	5	7510-01-307-9469	F-6	12
5985-01-296-0580	F-2	4		F-7	8
5305-01-304-4447	F-3	29		F-8	7
	F-6	18	5985-01-307-9486	F-4	2
5340-01-307-5442	F-3	4	5985-01-307-9487	F-6	17
5310-01-307-5443	F-4	20	5985-01-307-9488	F-7	6
	F-6	22	5340-01-308-1053	F-3	1
5310-01-307-5444	F-4	18	5340-01-308-1054	F-3	2
5310-01-307-5445	F-5	19	5315-01-308-1055	F-3	10
3020-01-307-5455	F-3	14		F-4	8
	F-4	5		F-5	10
	F-5	8		F-6	6
	F-6	11	5310-01-308-1056	F-3	12
5935-01-307-5457	F-8	1		F-4	10
5310-01-307-5458	F-6	14		F-5	7
5340-01-307-5465	F-6	13		F-6	10
5305-01-307-5466	F-3	23	5310-01-308-1062	F-7	4
	F-6	19	5985-01-308-1063	F-3	8
	F-7	10	5985-01-308-1064	F-4	9
5305-01-307-5467	F-3	26	5985-01-308-1065	F-6	5

CROSS-REFERENCE INDEXES

NATIONAL STOCK NUMBER INDEX

STOCK NUMBER	FIG.	ITEM	STOCK NUMBER	FIG.	ITEM
5985-01-308-1066	F-7	1			
5315-01-308-1070	F-7	2			
5305-01-308-1246	F-4	17			
	F-6	21			
3040-01-309-2831	F-3	9			
	F-4	7			
	F-5	11			
	F-6	7			
5985-01-314-2775	F-2	1			
5985-01-314-5256	F-8	5			
5985-01-314-8996	F-9	8			
5985-01-315-1362	F-3	18			
4010-01-318-8001	F-14	3			
5985-01-326-7685	F-9	6			
5985-01-332-5581	F-3	7			
5985-01-332-5582	F-8	2			
5340-01-332-8153	F-5	2			
5315-01-332-8158	F-3	6			
4030-01-333-3672	F-8	3			
4030-01-333-3673	F-6	3			
5305-01-333-3759	F-5	17			
5305-01-333-3760	F-3	33			
5305-01-333-5248	F-8	8			
5305-01-334-0392	F-3	35			
4020-01-341-6986	F-10	4			
	F-11	4			
	F-12	4			
5340-01-341-7168	F-12	1			
5340-01-341-7169	F-11	1			
5340-01-341-7170	F-10	3			
	F-11	3			
	F-12	3			
5340-01-341-7171	F-10	1			
5120-01-343-3326	F-10	2			
	F-11	2			
	F-12	2			
5310-01-350-0418	F-14	4			
5310-01-350-0531	F-14	2			
5310-01-350-0532	F-13	2			
5310-01-350-1873	F-13	3			
4030-01-368-5692	F-8	4			
5985-01-369-0349	F-3	15			
4030-01-372-0318	F-3	3			
5985-01-373-1413	F-3	17			
5985-01-377-2315	F-1	2			
5315-01-379-8612	F-13	4			

CROSS-REFERENCE INDEXES

PART NUMBER INDEX

CAGEC	PART NUMBER	STOCK NUMBER	FIG.	ITEM
80205	NAS561-F5-15	5315-01-379-8612	F-13	4
80063	SCC34000	4030-00-187-5263	F-9	1
67032	475050		F-13	1
0AM23	551439	4010-01-318-8001	F-14	3
0AM23	551447	3040-01-258-0994	F-9	2
0AM23	552488	4030-01-266-3017	F-9	5
0AM23	554362	4020-01-260-4912	F-9	3
0AM23	556001	5985-01-314-5256	F-8	5
0AM23	556080	5310-01-307-5445	F-5	19
67032	556144	5985-01-254-9563	F-2	6
67032	556145	5985-01-296-0579	F-2	5
67032	556147	5985-01-254-9566	F-2	3
0AM23	556164	5310-01-307-9466	F-3	25
0AM23	556264		F-4	4
			F-5	4
0AM23	556268	5985-01-307-9462	F-9	13
0AM23	556311	5985-01-315-1362	F-3	18
0AM23	556312	5985-01-307-9486	F-4	2
0AM23	556313		F-5	3
0AM23	556341	5985-01-369-0349	F-3	15
0AM23	556347	5985-01-307-9487	F-6	17
0AM23	556348	5985-01-307-9488	F-7	6
67032	556373	5985-01-296-0580	F-2	4
0AM23	556376	7510-01-307-9469	F-6	12
			F-7	8
			F-8	7
0AM23	556411		F-3	32
0AM23	556443	5340-01-332-8153	F-5	2
0AM23	556446		F-4	3
0AM23	556488	5985-01-332-5582	F-8	2
0AM23	556489	5985-01-314-8996	F-9	8
0AM23	556490	5985-01-264-2753	F-9	7
0AM23	556491	4030-01-333-3672	F-8	3
0AM23	556505	5985-01-377-2315	F-1	2
0AM23	556508		F-1	3
67032	556509	5985-01-314-2775	F-2	1
67032	556511	5985-01-326-7685	F-9	6
67032	556849	5120-01-343-3326	F-10	2
			F-11	2
			F-12	2
0AM23	556988	5305-01-333-5248	F-8	8
14933	558027	5985-01-264-2764	F-9	4
0AM23	558268		F-5	12
0AM23	558323	5310-01-307-5444	F-4	18
67032	558357	5340-01-341-7169	F-11	1
67032	558358	5340-01-341-7171	F-10	1
67032	558360	5340-01-341-7168	F-12	1
0AM23	558457		F-14	5
67032	558797	4020-01-341-6986	F-10	4
			F-11	4
			F-12	4

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PART NUMBER INDEX

CAGEC	PART NUMBER	STOCK NUMBER	FIG.	ITEM
0AM23	558893	5985-01-373-1413	F-3	17
0AM23	558900		F-3	21
			F-6	1
0AM23	558901		F-3	20
0AM23	558902	5640-01-307-5480	F-3	13
0AM23	558903	5340-01-307-5442	F-3	4
0AM23	558904	5340-01-308-1053	F-3	1
0AM23	558906	5985-01-308-1064	F-4	9
0AM23	558907		F-4	6
0AM23	558909	5340-01-308-1054	F-3	2
0AM23	558920		F-5	6
0AM23	558922		F-5	5
0AM23	558923	3020-01-307-5455	F-3	14
			F-4	5
			F-5	8
			F-6	11
0AM23	558925		F-6	16
0AM23	558927		F-6	2
0AM23	558928	4030-01-333-3673	F-6	3
0AM23	558929	5340-01-307-5465	F-6	13
0AM23	558930	5985-01-308-1066	F-7	1
0AM23	558931	3020-01-307-9463	F-7	5
0AM23	558932	3040-01-307-5485	F-7	3
0AM23	558953	5985-01-332-5581	F-3	7
0AM23	558972	9330-01-307-9467	F-4	13
			F-5	13
			F-6	8
0AM23	558988	9330-01-307-9468	F-4	1
			F-5	1
			F-6	9
			F-7	9
			F-8	6
0AM23	559014		F-3	5
0AM23	559015		F-4	12
0AM23	559142	3040-01-309-2831	F-3	9
			F-4	7
			F-5	11
			F-6	7
0AM23	559205		F-4	11
0AM23	559206		F-5	9
0AM23	559207	5985-01-308-1065	F-6	5
0AM23	559208	5310-01-307-5443	F-4	20
			F-6	22
0AM23	559213		F-3	11
67032	559365	5985-01-254-9557	F-9	9
0AM23	559379	5340-01-270-5083	F-1	1
67032	559380	5985-01-254-9560	F-9	10
67032	559381	5985-01-254-9561	F-9	11
67032	559382	5985-01-254-9562	F-9	12
0AM23	559657		F-6	4
0AM23	559658	4030-01-372-0318	F-3	3

CROSS-REFERENCE INDEXES

PART NUMBER INDEX

CAGEC	PART NUMBER	STOCK NUMBER	FIG.	ITEM
67032	559660	4030-01-368-5692	F-8	4
67032	559674	5985-01-254-9567	F-2	2
0AM23	559685	5985-01-307-9464	F-7	7
0AM23	559686	5310-01-308-1062	F-7	4
0AM23	559827	4020-01-260-4908	F-2	7
0AM23	559828	4020-01-260-4909	F-2	8
0AM23	559829	4020-01-260-4910	F-2	9
0AM23	559830	4020-01-266-9175	F-2	10
0AM23	559831	4020-01-260-4911	F-2	11
0AM23	559834	5310-01-308-1056	F-3	12
			F-4	10
			F-5	7
			F-6	10
0AM23	559932		F-3	16
0AM23	611290	5985-01-308-1063	F-3	8
0AM23	617248	5315-01-308-1055	F-3	10
			F-4	8
			F-5	10
			F-6	6
0AM23	617289	5315-01-332-8158	F-3	46
0AM23	617369	5935-01-307-5457	F-8	1
0AM23	622709	5305-01-307-5474	F-5	18
			F-7	14
0AM23	622712	5305-01-307-5478	F-8	9
0AM23	622721	5305-01-307-5482	F-5	14
0AM23	622722	5305-01-307-5470	F-3	30
0AM23	622723	5305-01-307-5466	F-3	23
			F-6	19
			F-7	10
0AM23	622976	5305-01-334-0392	F-3	35
0AM23	624736	5310-01-350-1873	F-13	3
0AM23	624787	5310-01-350-0531	F-14	2
0AM23	625055	5310-01-296-0205	F-3	31
0AM23	900021	5310-01-296-0206	F-4	15
			F-7	13
0AM23	900028	5310-01-350-0418	F-14	4
0AM23	900040	5305-01-308-1246	F-4	17
			F-6	21
0AM23	900042	5310-01-296-0203	F-3	22
			F-5	15
			F-6	20
			F-7	11
67032	900049	5340-01-341-7170	F-10	3
			F-11	3
			F-12	3
0AM23	900055	5310-01-296-0204	F-3	28
0AM23	900057	5305-01-307-5468	F-3	27
0AM23	900058	5315-01-308-1070	F-7	2
0AM23	900065	5305-01-307-5471	F-4	16
			F-7	12
0AM23	900070		F-14	1

CROSS-REFERENCE INDEXES

PART NUMBER INDEX

CAGEC	PART NUMBER	STOCK NUMBER	FIG.	ITEM
0AM23	900300	5310-01-296-0207	F-6	24
0AM23	900311	5305-01-307-5473	F-4	14
			F-5	16
0AM23	900312	5305-01-333-3759	F-5	17
0AM23	900408	5310-01-307-5458	F-6	14
0AM23	900409	5310-01-307-5481	F-8	10
0AM23	900501	5305-01-307-5475	F-3	34
			F-6	23
0AM23	900572	5305-01-307-5467	F-3	26
0AM23	900573	5305-01-307-5469	F-3	24
			F-4	19
			F-5	20
0AM23	900623	5310-01-350-0532	F-13	2
0AM23	900740	5320-01-296-0242	F-6	15
0AM23	900866	5320-01-296-0241	F-3	19
0AM23	901048	5305-01-333-3760	F-3	33
0AM23	901108	5305-01-304-4447	F-3	29
			F-6	18

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FIGURE AND ITEM NUMBER INDEX

FIG.	ITEM	STOCK NUMBER	CAGEC	PART NUMBER
F-1	1	5340-01-270-5083	0AM23	559379
F-1	2	5985-01-377-2315	0AM23	556505
F-1	3		0AM23	556508
F-2	1	5985-01-314-2775	67032	556509
F-2	2	5985-01-254-9567	67032	559674
F-2	3	5985-01-254-9566	67032	556147
F-2	4	5985-01-296-0580	67032	556373
F-2	5	5985-01-296-0579	67032	556145
F-2	6	5985-01-254-9563	67032	556144
F-2	7	4020-01-260-4908	0AM23	559827
F-2	8	4020-01-260-4909	0AM23	559828
F-2	9	4020-01-260-4910	0AM23	559829
F-2	10	4020-01-266-9175	0AM23	559830
F-2	11	4020-01-260-4911	0AM23	559831
F-3	1	5340-01-308-1053	0AM23	558904
F-3	2	5340-01-308-1054	0AM23	558909
F-3	3	4030-01-372-0318	0AM23	559658
F-3	4	5340-01-307-5442	0AM23	558903
F-3	5		0AM23	559014
F-3	6	5315-01-332-8158	0AM23	617289
F-3	7	5985-01-332-5581	0AM23	558953
F-3	8	5985-01-308-1063	0AM23	611290
F-3	9	3040-01-309-2831	0AM23	559142
F-3	10	5315-01-308-1055	0AM23	617248
F-3	11		0AM23	559213
F-3	12	5310-01-308-1056	0AM23	559834
F-3	13	5640-01-307-5480	0AM23	558902
F-3	14	3020-01-307-5455	0AM23	558923
F-3	15	5985-01-369-0349	0AM23	556341
F-3	16		0AM23	559932
F-3	17	5985-01-373-1413	0AM23	558893
F-3	18	5985-01-315-1362	0AM23	556311
F-3	19	5320-01-296-0241	0AM23	900866
F-3	20		0AM23	558901
F-3	21		0AM23	558900
F-3	22	5310-01-296-0203	0AM23	900042
F-3	23	5305-01-307-5466	0AM23	622723
F-3	24	5305-01-307-5469	0AM23	900573
F-3	25	5310-01-307-9466	0AM23	556164
F-3	26	5305-01-307-5467	0AM23	900572
F-3	27	5305-01-307-5468	0AM23	900057
F-3	28	5310-01-296-0204	0AM23	900055
F-3	29	5305-01-304-4447	0AM23	901108
F-3	30	5305-01-307-5470	0AM23	622722
F-3	31	5310-01-296-0205	0AM23	625055
F-3	32		0AM23	556411
F-3	33	5305-01-333-3760	0AM23	901048
F-3	34	5305-01-307-5475	0AM23	900501
F-3	35	5305-01-334-0392	0AM23	622976
F-4	1	9330-01-307-9468	0AM23	558988
F-4	2	5985-01-307-9486	0AM23	556312

CROSS-REFERENCE INDEXES

FIGURE AND ITEM NUMBER INDEX

FIG.	ITEM	STOCK NUMBER	CAGEC	PART NUMBER
F-4	3		0AM23	556446
F-4	4		0AM23	556264
F-4	5	3020-01-307-5455	0AM23	558923
F-4	6		0AM23	558907
F-4	7	3040-01-309-2831	0AM23	559142
F-4	8	5315-01-308-1055	0AM23	617248
F-4	9	5985-01-308-1064	0AM23	558906
F-4	10	5310-01-308-1056	0AM23	559834
F-4	11		0AM23	559205
F-4	12		0AM23	559015
F-4	13	9330-01-307-9467	0AM23	558972
F-4	14	5305-01-307-5473	0AM23	900311
F-4	15	5310-01-296-0206	0AM23	900021
F-4	16	5305-01-307-5471	0AM23	900065
F-4	17	5305-01-308-1246	0AM23	900040
F-4	18	5310-01-307-5444	0AM23	558323
F-4	19	5305-01-307-5469	0AM23	900573
F-4	20	5310-01-307-5443	0AM23	559208
F-5	1	9330-01-307-9468	0AM23	558988
F-5	2	5340-01-332-8153	0AM23	556443
F-5	3		0AM23	556313
F-5	4		0AM23	556264
F-5	5		0AM23	558922
F-5	6		0AM23	558920
F-5	7	5310-01-308-1056	0AM23	559834
F-5	8	3020-01-307-5455	0AM23	558923
F-5	9		0AM23	559206
F-5	10	5315-01-308-1055	0AM23	617248
F-5	11	3040-01-309-2831	0AM23	559142
F-5	12		0AM23	558268
F-5	13	9330-01-307-9467	0AM23	558972
F-5	14	5305-01-307-5482	0AM23	622721
F-5	15	5310-01-296-0203	0AM23	900042
F-5	16	5305-01-307-5473	0AM23	900311
F-5	17	5305-01-333-3759	0AM23	900312
F-5	18	5305-01-307-5474	0AM23	622709
F-5	19	5310-01-307-5445	0AM23	556080
F-5	20	5305-01-307-5469	0AM23	900573
F-6	1		0AM23	558900
F-6	2		0AM23	558927
F-6	3	4030-01-333-3673	0AM23	558928
F-6	4		0AM23	559657
F-6	5	5985-01-308-1065	0AM23	559207
F-6	6	5315-01-308-1055	0AM23	617248
F-6	7	3040-01-309-2831	0AM23	559142
F-6	8	9330-01-307-9467	0AM23	558972
F-6	9	9330-01-307-9468	0AM23	558988
F-6	10	5310-01-308-1056	0AM23	559834
F-6	11	3020-01-307-5455	0AM23	558923
F-6	12	7510-01-307-9469	0AM23	556376
F-6	13	5340-01-307-5465	0AM23	558929

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FIGURE AND ITEM NUMBER INDEX

FIG.	ITEM	STOCK NUMBER	CAGEC	PART NUMBER
F-6	14	5310-01-307-5458	0AM3	900408
F-6	15	5320-01-296-0242	0AM23	900740
F-6	16		0AM23	558925
F-6	17	5985-01-307-9487	0AM23	556347
F-6	18	5305-01-304-4447	0AM23	901108
F-6	19	5305-01-307-5466	0AM23	622723
F-6	20	5310-01-296-0203	0AM23	900042
F-6	21	5305-01-308-1246	0AM23	900040
F-6	22	5310-01-307-5443	0AM23	559208
F-6	23	5305-01-307-5475	0AM23	900501
F-6	24	5310-01-296-0207	0AM23	900300
F-7	1	5985-01-308-1066	0AM23	558930
F-7	2	5315-01-308-1070	0AM23	900058
F-7	3	3040-01-307-5485	0AM23	558932
F-7	4	5310-01-308-1062	0AM23	559686
F-7	5	3020-01-307-9463	0AM23	558931
F-7	6	5985-01-307-9488	0AM23	556348
F-7	7	5985-01-307-9464	0AM23	559685
F-7	8	7510-01-307-9469	0AM23	556376
F-7	9	9330-01-307-9468	0AM23	558988
F-7	10	5305-01-307-5466	0AM23	622723
F-7	11	5310-01-296-0203	0AM23	900042
F-7	12	5305-01-307-5471	0AM23	900065
F-7	13	5310-01-296-0206	0AM23	900021
F-7	14	5305-01-307-5474	0AM23	622709
F-8	1	5935-01-307-5457	0AM23	617369
F-8	2	5985-01-332-5582	0AM23	556488
F-8	3	4030-01-333-3672	0AM23	556491
F-8	4	4030-01-368-5692	67032	559660
F-8	5	5985-01-314-5256	0AM23	556001
F-8	6	9330-01-307-9468	0AM23	558988
F-8	7	7510-01-307-9469	0AM23	556376
F-8	8	5305-01-333-5248	0AM23	556988
F-8	9	5305-01-307-5478	0AM23	622712
F-8	10	5310-01-307-5481	0AM23	900409
F-9	1	4030-00-187-5263	80063	SCC34000
F-9	2	3040-01-258-0994	0AM23	551447
F-9	3	4020-01-260-4912	0AM23	554362
F-9	4	5985-01-264-2764	14933	558027
F-9	5	4030-01-266-3017	0AM23	552488
F-9	6	5985-01-326-7685	67032	556511
F-9	7	5985-01-264-2753	0AM23	556490
F-9	8	5985-01-314-8996	0AM23	556489
F-9	9	5985-01-254-9557	67032	559365
F-9	10	5985-01-254-9560	67032	559380
F-9	11	5985-01-254-9561	67032	559381
F-9	12	5985-01-254-9562	67032	559382
F-9	13	5985-01-307-9462	0AM23	556268
F-10	1	5340-01-341-7171	67032	558358
F-10	2	5120-01-343-3326	67032	556849
F-10	3	5340-01-341-7170	67032	900049

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FIGURE AND ITEM NUMBER INDEX

FIG.	ITEM	STOCK NUMBER	CAGEC	PART NUMBER
F-10	4	4020-01-341-6986	67032	558797
F-11	1	5340-01-341-7169	67032	558357
F-11	2	5120-01-343-3326	67032	556849
F-11	3	5340-01-341-7170	67032	900049
F-11	4	4020-01-341-6986	67032	558797
F-12	1	5340-01-341-7168	67032	558360
F-12	2	5120-01-343-3326	67032	556849
F-12	3	5340-01-341-7170	67032	900049
F-12	4	4020-01-341-6986	67032	558797
F-13	1		67032	475050
F-13	2	5310-01-350-0532	0AM23	900623
F-13	3	5310-01-350-1873	0AM23	624736
F-13	4	5315-01-379-8612	80205	NAS561-F5-15
F-14	1		0AM23	900070
F-14	2	5310-01-350-0531	0AM23	624787
F-14	3	4010-01-318-8001	0AM23	551439
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F-14	5		0AM23	558457

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RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS

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ATTN: AMSTA-US
Stateside, N. J. 07703

DATE SENT
10 July 1975

PUBLICATION NUMBER	PUBLICATION DATE	PUBLICATION TITLE
TM 11-5840-340-12	23 Jan 74	Radar Set AN/PRC-76

BE EXACT PIN-POINT WHERE IT IS

PAGE NO.	PARA-GRAPH	FIGURE NO.	TABLE NO.	IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:
2-25	2-28			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° withiut degradation of operation.
3-10	3-3		3-1	Item 5, Function column. Change "2db" to "3db." REASON: The adjustment procedure the the TRANS POWER FAULT indicator calls for a 3 db (500 watts) adjustment to light the TRANS POWER FAULT indicator.
5-6	5-8			Add new step e.1 to read, "Replace cover plate removed in step e.1, above." REASON: To replace the cover plate.
		FO3		Zone C 3. On Ji-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.

SAMPLE

PRINTED NAME GRADE OR TITLE AND TELEPHONE NUMBER
SSG I. M. DeSpirtof 999-1776

SIGN HERE
SSG I. M. DeSpirtof

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TM-5985-384-12&P	1 March 1989	Mast, Antenna, 15 Meter AB-1339/G

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General, United States Army
Chief of Staff

Official:

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THE METRIC SYSTEM AND EQUIVALENTS

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

WEIGHTS
1 Gram = 0.001 Kilograms = 1000 Milligrams = 0.035 Ounces
1 Kilogram = 1000 Grams = 2.2 Lb
1 Metric Ton = 1000 Kilograms = 1 Megagram = 1.1 Short Tons

LIQUID MEASURE
1 Millimeter = 0.001 Liters = 0.0338 Fluid Ounces
1 Liter = 1000 Milliliters = 33.82 Fluid Ounces

32 Fahrenheit is equivalent to 0 Celsius

SQUARE MEASURE
1 Sq Centimeter = 100 Sq Millimeters = 0.155 Sq Inches
1 Sq Meter = 10,000 Sq Centimeters = 10.76 Sq Feet
1 Sq Kilometer = 1,000,000 Sq Meters = 0.0386 Sq Miles

CUIBIC MEASURE
1 Cu Centimeter = 1000 Cu Millimeters = 0.06 Cu Inches
1 Cu Meter = 1,000,000 Cu Centimeters = 35.31 Cu Feet

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

9/5 C +32 = F

APPROXIMATE CONVERSION FACTORS

TO CHANGE	TO	MULTIPLY BY
Inches	Centimeters	2.540
Feet	Meters	0.305
Yards	Meters	0.914
Miles	Kilometers	1.609
Square Inches	Square Centimeters	6.451
Square Feet	Square Meters	0.093
Square Yards	Square Meters	0.836
Square Miles	Square Kilometers	2.590
Acres	Square Hectometers	0.405
Cubic Feet	Cubic Meters	0.028
Cubic Yards	Cubic Meters	0.765
Fluid Ounces	Millimeters	29.573
Pints	Liters	0.473
Quarts	Liters	0.946
Gallons	Liters	3.785
Ounces	Grams	28.349
Pounds	Kilograms	0.454
Short Tons	Metric Tons	0.907
Pound-Feet	Newton-Meters	1.356
Pounds Per Square Inch	Kilopascals	6.895
Miles Per Gallon	Kilometers Per Liter	0.425
Miles Per Hour	Kilometers Per Hour	1.609

TO CHANGE	TO	MULTIPLY BY
Centimeters	Inches	0.394
Meters	Feet	3.280
Kilometers	Yards	0.621
Square Centimeters	Square Inches	0.155
Square Meters	Square Feet	10.764
Square Meters	Square Yards	1.196
Square Kilometers	Square Miles	0.386
Square Hectometers	Acres	2.471
Cubic Meters	Cubic Foot	35.315
Cubic Meters	Cubic Yards	1.308
Millimeters	Fluid Ounces	0.034
Liters	Pints	2.113
Liters	Quarts	1.057
Liters	Gallons	0.264
Grams	Ounces	0.035
Kilograms	Pounds	2.205
Metric Tons	Short Tons	1.102
Newton-Meters	Pound-Feet	0.738
Kilopascals	Pounds per Square Inch	0.145
Kilometers per Liter	Miles per Gallon	2.354
Kilometers per Hour	Miles per Hour	0.621