U.S. Department of Transportation
United States Coast Guard

Commandant
United States Coast Guard

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U. S. Coast Guard
Washington, DC 20593
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COMMANDANT INSTRUCTION M4450.1A

Subj: Inspection, Packaging, Handling, Storage, and Transportation Handbook.

1. PURPOSE. This Handbook provides basic guidance to Coast Guard personnel for the inspection, packaging, handling, storage and transportation of equipments under the materiel management cognizance of Coast Guard Inventory Control Points (ICPs).

2. DIRECTIVES EFFECTED. COMDTINST. M4450.1 is canceled.

3. ACTION. District commanders and unit commanding officers shall use this handbook as guidance in the inspection, packaging, handling, storage and transportation of materiel.

4. SUMMARY OF CHANGES.

   a. Procedures for handling aeronautical equipment are incorporated.

   b. A new format is incorporated.

5. CHANGES.

   a. Consecutive numbered changes will be issued to this handbook by Commandant Notice as required.

   b. Comments and recommendations for changes and improvements to this handbook shall be forwarded to Commandant (G-FLP-2).

/s/ P.D.HENNEBERRY
Acting Comptroller

PART XII

INSPECTION, PACKAGING, HANDLING, STORAGE AND TRANSPORTATION GUIDELINES

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(XII-2) DD Form 6 - Packaging Improvement Report

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CHAPTER 1. GENERAL INSTRUCTIONS

A. Purpose.

1. This chapter provides uniform procedures for inspecting, packaging, handling, storing and transporting (IPHST) selected equipments under the materiel management cognizance of the Coast Guard Inventory Control Points (ICP). It provides basic guidance to personnel not normally associated with IPHST functions and supplements the experience and standard information sources of stock point personnel. These guidelines are the minimum necessary to protect valuable Coast Guard assets, whether in ready-for-issue (RFI) condition or waiting repairs (Non-RFI).

2. These guideline do not replace delivery or packaging instructions to contractors or Designated Overhaul Points. Such instructions are issued by cognizant Inventory Control Points and Contracting Offices as each piece of equipment and delivery situation dictates.

B. Background.

1. Military and Federal standards, military specifications, the Joint Packaging Manual (NAVSUP PUB 502 (0530-00-050-2000)), NAVSUP PUB 503 (0530-00-050-3200), NAVSUP PUB 504 (0530-00-05-0-4000), the Storage and Materials Handling Manual (DoD 4145.19 (Series of Manuals)), Supply Afloat Fleet and Field Packaging Procedures, (NAVSUP) 484 Rev. 4-81, and Equipment Technical Manuals provide the most detailed sources of information on the IPHST requirements for specific equipments. As such, they are invaluable tools for assisting stock points to perform inspections and maintain materiel in issuable condition. These sources, however, are voluminous, complex and not always available. Errors or delays in the most basic IPHST decision have resulted in damage during handling and transportation, damage or deterioration because of improper storage, and loss within the system. Equipment, removed from ships, to be turned in for storage or repair has particularly suffered. These guidelines are intended to help personnel performing IPHST functions make correct and timely decisions. Following this readily available source of basic guidelines will improve equipment care and provide better asset visibility to Inventory Managers.

1-C. Policy. These guidelines are intended for use in conjunction with existing documentation. They provide basic guidance for minimum care only and do not supersede local or command policies which require greater care of equipments. Any apparent conflict between these guidelines and established policy should be immediately reported to Commandant (G-FLP-2).

D. Organization and Use. These guidelines present basic IPHST information in simple format and language. Engineering or logistic terms are used only when needed for clarity or to avoid using nonstandard terms. These guidelines will be used in many places and, therefore, cannot include local directives covering the IPHST functions. It provides guidance for minimum care of equipments. Where local guidance provides for greater care, follow the local guidance. Complete preservation-packaging of equipments is beyond the scope of these guidelines. If complete preservation-packaging is to be done by anyone other than a manufacturer or the regular Designated Overhaul Point (DOP), specific instructions should be requested from the appropriate inventory control point.

1. Chapter 2 summarizes IPHST requirements in three tables. This quick-reference materiel may be sufficient to remind IPHST personnel of requirements for familiar equipments. The first column of each table is the number of the specific equipment procedure which can be checked if more detail is needed. For an explanation of the alphabetical characters in the columns adjacent to the equipment nomenclature, refer to the pages immediately following each table.

2. Chapter 3, General Procedures, condenses common materiel to help avoid repetition and makes it easier for IPHST personnel to become familiar with actions frequently required.

3. Chapter 4 is a series of IPHST procedures for individual equipments. These individual procedures give exception to Chapter 3, General Procedures. Remember, you can always provide greater protection than indicated. Procedures are arranged alphabetically by equipment. All individual procedures are listed in the Table of Contents.

CHAPTER 2. TABULAR SUMMARY OF INSPECTION, PACKAGING HANDLING, STORAGE AND TRANSPORTATION REQUIREMENTS

A. General.

1. The tables in this chapter provide a quick reference on Inspection, Packaging Handling, Storage and Transportation Requirements (IPHST). They are not detailed. If you are unfamiliar with any of the requirements, you should consult chapter 3, General Procedures, and chapter 4, Individual Equipment IPHST Procedures, for further detail.

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EQUIPMENT STORAGE REQUIREMENTS

PROCEDURE NUMBER	EQUIPMENT NOMENCLATURE	CONTROLLED HUMIDITY	HEATED WAREHOUSE	UNHEATED WAREHOUSE	OPEN COVERED STORAGE	OPEN STORAGE	CLASSIFIED MATERIEL	MAGNETIC MATERIEL	HUMIDITY INDICATORS	PRESSURE GAGES	SHELF LIFE MATERIEL	REMARKS
4-A	Air Compressor	a	b&c	d					r			
4-B	Anchor Chain					x						
4-C	Anchors, Marine					x						
4-D	Antennas & Antenna Components	e	b&f	g	h		p		r			See procedure for special note.
4-E	Aux Power Unit	e	b	i					r			
4-F	Battery Primary (Air Depolarized)		t									See procedure for special requirements.
4-G	Battery, Primary (Dry Cell A/N)		x									
4-H	Battery, Storage		x									
4-I	Battery, Storage (Nickel Calmium)		x									
4-J	Bearings, Ball & Roller Oil, Impregnated (Oilite) & Sleeve types		x									

PROCEDURE NUMBER	EQUIPMENT NOMENCLATURE	CONTROLLED HUMIDITY	HEATED WAREHOUSE	UNHEATED WAREHOUSE	OPEN COVERED STORAGE	OPEN STORAGE	CLASSIFIED MATERIEL	MAGNETIC MATERIEL	HUMIDITY INDICATORS	PRESSURE GAGES	SHELF LIFE MATERIEL	REMARKS
4-K	Boilers, Steam, & Related Equipment	e	b	i&j					r			
4-L	Cable, Cord & Wire Assemblies			x								See procedures for restrictions.
4-M	Communications & Electronics Components	a	b&f	g			p	q	r			
4-N	Computer & Allied Equipments	e	b	i					r			
4-O	Consoles, Displays & Control Units	e	b	i			p	q	r			
4-P	Distilling Units Water		k	l								
4-Q	Electric Motors & Generators	e	b	i&j					r		t	
4-R	Electrical Components & Devices	a	b&f	i&j					r			
4-S	Emergency Equipment	m	b	f&j								
4-T	Engines Aircraft	e	b	i	o	o			r			

EQUIPMENT STORAGE REQUIREMENTS

PROCEDURE NUMBER	EQUIPMENT NOMENCLATURE	CONTROLLED HUMIDITY	HEATED WAREHOUSE	UNHEATED WAREHOUSE	OPEN COVERED STORAGE	OPEN STORAGE	CLASSIFIED MATERIEL	MAGNETIC MATERIEL	HUMIDITY INDICATORS	PRESSURE GAGES	SHELF LIFE MATERIEL	REMARKS
4-[illegible]	Engines, Diesel, Naval Shipboard	e	b	i					r			
4-V	Engines, Gas Turbine Naval Shipboard	e	b	i					r	s	t	
4-W	Gas Generating & Handling Equipment	e	b	i&j					r	s		
4-X	Gear Assemblies								r			See procedures for special requirements.
4-Y	Gear Box, Intermediate (Helo)	e	b		i							
4-Z	Gear Box, Main (Helo)	e	b	i	o	o			r			
4-AA	Gear Box, Reduction (Fixed Wing)	e	b	i	o	o			r			
4-AB	Gear Box, Tail (Helo)	e	b	i								
4-AC	Gears, Steering Electro Hydraulic Marine								r			See procedure for special requirements.
4-AD	Gyrocompasses	e	b	i					r			

PROCEDURE NUMBER	EQUIPMENT NOMENCLATURE	CONTROLLED HUMIDITY	HEATED WAREHOUSE	UNHEATED WAREHOUSE	OPEN COVERED STORAGE	OPEN STORAGE	CLASSIFIED MATERIEL	MAGNETIC MATERIEL	HUMIDITY INDICATORS	PRESSURE GAGES	SHELF LIFE MATERIEL	REMARKS
4-AE	Indicators & Indicating Equipment	a	b&f	i					r			
4-AF	Instruments, Electrical & Electronic Test	a	k&n	i					r			
4-AG	Laundry and Dry Cleaning Equipment	e	b	o&j					r			
4-AH	Meters, Detectors & Monitors	e	b	i&j					r			
4-AI	Propellers				x		p					See procedure for special requirements.
4-AJ	Pumps, General	a	b&f	i					r			
4-AK	Refrigerating & Air Conditioning Units	e	b	i					r	s	t	
4-AL	Refrigerators & Related Equipment	e	b&f	i					r			
4-AM	Rodmeters & Stadimeters	e	b	o					r			Store in special containers.

EQUIPMENT STORAGE REQUIREMENTS

PROCEDURE NUMBER	EQUIPMENT NOMENCLATURE	CONTROLLED HUMIDITY	HEATED WAREHOUSE	UNHEATED WAREHOUSE	OPEN COVERED STORAGE	OPEN SHOPTALK	CLASSIFIED MATERIEL	MAGNETIC MATERIEL	HUMIDITY INDICATORS	PRESSURE GAGES	SHELF LIFE MATERIEL	REMARKS
4-AN	Rotor Blade, Main (Helo)	e	b	i	o	o			r			
4-AO	Rotor Head	e	b	i	o	o			r			
4-AP	Servo-Components Precision Inst., Rotating		k	f								
4-AQ	Shafting, Ship Propulsion			x								See procedure for special requirements.
4-AR	Ship Inertial Navigation Systems (SINS) and Compass Switch Equipment	a	b&f				p	q	r			SINS gyroscopes have special requirements. See procedure.
4-AS	Sonar Transducers & Domes										t	Special instructions. See procedure.
4-AT	Steam Turbines								r			Special instructions. See procedure.
4-AU	Switchboards	e	b	i					r			

EQUIPMENT STORAGE REQUIREMENTS

PROCEDURE NUMBER	EQUIPMENT NOMENCLATURE	CONTROLLED HUMIDITY	HEATED WAREHOUSE	UNHEATED WAREHOUSE	OPEN COVERED STORAGE	OPEN STORAGE	CLASSIFIED MATERIEL	MAGNETIC MATERIEL	HUMIDITY INDICATORS	PRESSURE GAGES	SHELF LIFE MATERIEL	REMARKS
4-AV	Valves	a	b	o&j					r			
4-AW	Winches & Heavy Electro-Hydraulic & Electro-Mechanical Equipment	a	b	o&j					r			

B. Equipment Storage Requirements (cont'd)

1. Footnotes.

a. Equipments which should have Method I or II protection but do not, should be stored in a controlled humidity area, if possible. This includes non-RFI equipments. Equipments normally packaged Method II should have first priority.

b. Minimum storage level for equipments which should have Method I or II protection, but do not (includes non-RFI). If you cannot meet this minimum, store in an unheated warehouse and inform the Inven- tory Manager. Do not, in any case, store this equipment outside.

c. Desired storage level for all correctly packaged equipments and unpackaged equipments which would normally need only Method III protection.

d. Suitable alternative storage for correctly packaged equipments.

e. Equipments which should have Method II protection, but do not, should be stored in a controlled humidity area, if possible, Includes non-RFI equipments.

f. Equipments packaged Method I.

g. Equipments packaged Method II or III.

h. Forced by size. See procedure for instructions.

i. Equipment packaged Method II.

j. Equipments normally packaged Method III, whether or not correctly packaged.

k. Minimum storage for all equipments not correctly packaged (includes non-RFI). If you cannot meet this minimum, store in unheated warehouse and notify the Inventory Manager.

l. All correctly packaged equipments.

m. Equipments which should have Method I protection, but do not, should be stored in a controlled humidity area, if possible. Includes non-RFI equipments.

n. Equipments packaged Method I or III.

o. Equipments packaged Method I or II.

p. These equipments may be classified. If so, store in designated areas.

q. These equipments may contain magnetic material. If so, store in designated areas.

r. Some or all of these equipments are packaged Method II and have visible humidity indicators. These indicators must be checked periodically during storage. If indicators are not the normal blue color call in personnel qualified to make a technical inspec- tion.

s. Some or all of these equipments are internally pressurized or packed in pressurized containers with installed pressure gauges visible. These gauges must be checked periodically to make sure pressures remain above indicated minimums. If pressures drop below minimums call in personnel qualified to make a technical inspection and repressurize.

t. Some or all of these equipments contain materiel with specific shelf lives. Check individual procedure.

*See Appendix A for definitions of Methods I , II, III (preservation-packaging)

TRANSPORTATION AND HANDLING REQUIREMENTS

PROCEDURE NUMBER	EQUIPMENT NOMENCLATURE	TRANSPORTATION MODES	a CLASSIFIED MATERIELS	b MAGNETIC MATERIELS	c OUTSIZE ITEMS	d REMARKS
4-A	Air Compressors	All				
4-B	Anchor Chain	Rail or Water			X	Rail shipment of large ship anchor chain is by open gondola car.
4-C	Anchors, Marine	All			X	
4-D	Antennas & Antenna Components	All	X		X	Do not use antenna elements as handling or tie-down points.
4-E	Aux Power Unit	All				
4-F	Battery, Primary (Air Depolarized)					Safety regulations prohibit air transportation if battery is preactivated.
4-G	Battery, Primary (Dry Cell A/N)	All				
4-H	Battery, Storage (Lead Acid)	No Air				
4-I	Battery, Storage (Nickel Cadmium)	No Air				
4-J	Bearing, Ball & Roller Oil Impregnated (OILITE) & Sleeve Types	All				

TRANSPORTATION AND HANDLING REQUIREMENTS

PROCEDURE NUMBER	EQUIPMENT NOMENCLATURE	TRANSPORTATION MODES	A CLASSIFIED MATERIELS	b MAGNETIC MATERIELS	c OUTSIZE ITEMS	d REMARKS
4-K	Boilers, Steam & Related Equipment	All			X	
4-L	Cable, Cord, & Wire Assemblies	All				Lift reels with slings and shaft through reels hub. Use spreader bar to prevent strain on reel flanges
4-M	Communications & Electronics Components	All	X	X		
4-N	Computers & Allies Equipment	All				Ship computer components in approved containers to prevent electromagnetic, electrostatic, or ultraviolet radiation damage.
4-O	Consoles, Displays & Control Units	All	X	X		
4-P	Distilling Units, Water	All				
4-Q	Electric Motors & Generators	All			X	
4-R	Electrical Components & Devices	All				
4-S	Emergency Equipment	All				

TRANSPORTATION AND HANDLING REQUIREMENTS

PROCEDURE NUMBER	EQUIPMENT NOMENCLATURE	TRANSPORTATION MODES	A CLASSIFIED MATERIALS	b MAGNETIC MATERIALS	c OUTSIZE ITEMS	d REMARKS
4-T	Engine, Aircraft	All			X	
4-U	Engines, Diesel, Naval Shipboard	All			X	
4-V	Engines, Gas Turbine, Naval Shipboard	All			X	
4-W	Gas Generating & Handling Equipment	All				
4-X	Gear Assemblies	All				
4-Y	Gear Box, Intermediate (Helo)	All				
4-Z	Gear Box, Main (Helo)	All			X	Must be kept upright for transportation by all modes.
4-AA	Gear Box, Reduction (Fixed Wing)	All			X	
4-AB	Gear Box, Tail (Helo)	All				
4-AC	Gears, Steering, Electro Hydraulic, Marine	All			X	
4-AD	Gyro-Compasses	All				

TRANSPORTATION AND HANDLING REQUIREMENTS

PROCEDURE NUMBER	EQUIPMENT NOMENCLATURE	TRANSPORTATION MODES	a CLASSIFIED MATERIALS	b MAGNETIC MATERIALS	c OUTSIZE ITEMS	d REMARKS
4-AB	Indicators & Indicating Equipment	All				
4-AF	Instruments, Electrical & Electronic Test	All				
4-AG	Laundry & Dry Cleaning Equipment	All				
4-AH	Meters, Detectors, & Monitors	All				
4-AI	Propellers	See remarks	X		X	All modes may be used for propellers under 108 inch diameter. Do not ship larger propellers by air. Check with Inventory Manager for special loading criteria for large propellers.
4-AJ	Pumps, General	All			X	
4-AK	Refrigerating & Air Conditioning Units	All				
4-AL	Refrigerators & Related Equipment	All				
4-AM	Rodmeters & Stadimeters	All				

TRANSPORTATION AND HANDLING REQUIREMENTS

PROCEDURE NUMBER	EQUIPMENT NOMENCLATURE	TRANSPORTATION MODES	CLASSIFIED MATERIALS a	MAGNETIC MATERIALS b	OUTSIZE ITEMS c	REMARKS d
4-AN	Rotor Blade, Main (Helo)	All			X	Length may prohibit air shipment.
4-AO	Rotor Head, (Helo)	All			X	
4-AP	Servo-Components, Precision Instrument, Rotating	All				
4-AQ	Shafting, Ship Propulsion	All				Handling and transporting large shaft requires special care.
4-AR	Ship Inertial Navigation System (SINS) & Compass Switching Equipment	All*		X		*Transport SINS gyroscopes by air only. See procedure for special instructions.
4-AS	Sonar Transducers & Domes	All			X	Check with Inventory Manager for special transportation instructions for very large domes.
4-AT	Steam Turbines	All			X	
4-AU	Switchboards	All				
4-AV	Valves	All				

TRANSPORTATION AND HANDLING REQUIREMENTS

PROCEDURE NUMBER	EQUIPMENT NOMENCLATURE	TRANSPORTATION MODES		A CLASSIFIED MATERIELS	b MAGNETIC MATERIELS	c OUTSIZE MATERIELS	d REMARKS
4-AW	Winches & Heavy Electro-Hydraulic & Electro-Mechnical Equipment	All			X		

C. Transportation and Handling Requirements (cont'd)

1. Footnotes.

a. Some equipments in this category may be classified or have classified technical manuals. Always ship classified materiel separately and in accordance with Departmental Regulations.

b. Some equipments in this category contain magnetic materiels. Shipment of magnetic materiels by air must conform to MIL-S-4473.

c. The size and weight of some equipments may require special handling equipment with heavy capacity. Exercise extreme care against personal injury. Extremely large equipments may limit transportation modes and require special arrangements. Specific instruction will usually accompany the direction to transport these equipments; if not received, request them from the Inventory Manager or Transportation Specialist.

d. In handling all equipment, observe container markings. Use special care with fragile or noise-tested equipments.

PROCEDURE NUMBER	EQUIPMENT NOMENCLATURE	CLASSIFIED MATERIEL	MAGNETIC MATERIEL	METHOD II PACKAGING	PRESSURIZED EQUIPMENT	NOISE-TESTED EQUIPMENT	REMARKS[a]
4-A	Air Compressors			d			
4-B	Anchor Chain			d			See procedure for special markings.
4-C	Anchors, Marine						Paint stencil markings on shank.
4-D	Antennas & Antenna Components	b		d			
4-E	Aux Power Unit			d			
4-F	Battery, Primary (Air Depolarized)						Special inspection, packaging and marking. See procedure.
4-G	Battery, Primary (Dry Cell A/N)						
4-H	Battery, Storage (Lead Acid)						
4-I	Battery, Storage (Nickel Cadmium						
4-J	Bearing, Ball & Roller Oil Impregnated (OILITE) & Sleeve Types						Ball and roller bearings are non-RFI if unit package is not intact.

INSPECTION AND PACKAGING REQUIREMENTS

PROJECTION NUMBER	EQUIPMENT NOMENCLATURE	CLASSIFIED MATERIEL	MAGNETIC MATERIEL	METHOD II PACKAGING	PRESSURIZED EQUIPMENT	SONIC-TESTED EQUIPMENT	a REMARKS
4-K	Boilers, Steam & Related Equipment			d			
4-L	Cable, Cord & Wire Assemblies						Special inspection, packaging and marking. See procedure.
4-M	Communications & Electronic Components	b	c	d			
4-N	Computers & Allied Equipment			d			
4-O	Consoles, Displays & Control Units	b	c	d			
4-P	Distilling Units, Water						Thermo-compression type has special markings. See procedure.
4-Q	Electric Motors & Generators			d		f	May be integral unit with prime mover. Do not disassemble.
4-R	Electrical Components & Devices			d			
4-S	Emergency Equipment						No preservative, lubricants, hydrocarbons in contact with pressure containing parts. Special markings for personal floatation devices. See procedure.

INSPECTION AND PACKAGING REQUIREMENTS

PROCEDURE NUMBER		CLASSIFIED MATERIEL	MAGNETIC MATERIEL	METHOD II PACKAGING	PRESSURIZED EQUIPMENT	NOISE-TESTED EQUIPMENT	
4-T	Engines, Aircraft			d	e		
4-U	Engines, Diesel, Naval Shipboard			d		f	
4-V	Engines, Gas Turbine Naval Shipboard			d	e	f	
4-W	Gas Generating & Handling Equipment			d	e		Special Markings. See procedure.
4-X	Gear Assemblies			d			Do not open sealed assemblies.
4-Y	Gear Box, Intermediate (Helo)			d			
4-Z	Gear Box, Main (Helo)			d	e		
4-AA	Gear Box, Reduction			d	e		
4-AB	Gear Box, Tail (Helo)			d			
4-AC	Gears, Steering, Electro-Hydraulic, Marine			d			
4-AD	Gyrocompasses			d			Secure gimbals if accessible.

INSPECTION AND PACKAGING REQUIREMENTS

PROCEDURE NUMBER	EQUIPMENT NOMENCLATURE	CLASSIFIED MATERIEL	MAGNETIC MATERIEL	METHOD OF PACKAGING	PRESSURIZED EQUIPMENT	NON-TESTED EQUIPMENT	REMARKS
4-AE	Indicators & Indicating Equipment			d			
4-AF	Instruments, Electrical & Electronic Test			d			
4-AG	Laundry & Dry Cleaning Equipment			d			
4-AH	Meters, Detectors, & Monitors			d			
4-AI	Propellers	b			c		Special [illegible]
4-AJ	Pumps, General			d		f	
4-AK	Refrigerating & Air Conditioning Units			d	e	f	
4-AL	Refrigerators & Related Equipment			d			
4-AM	Rodmeters & Stadimeters			d			Special [illegible]
4-AN	Rotor Blade, Main (Helo)			d			
4-AO	Rotor Head, (Helo)			d	e		

INSPECTION AND PACKAGING REQUIREMENTS

PROCEDURE NUMBER	EQUIPMENT NOMENCLATURE	CLASSIFIED MATERIEL	MAGNETIC MATERIEL	METHOD II PACKAGING	PRESSURIZED EQUIPMENT	NOISE-TESTED EQUIPMENT	REMARKS
4-AP	Servo-Components Precision Instrument, Rotating						
4-AQ	Shafting, Ship Propulsion						Special packaging and marking. See procedure.
4-AR	Ship Inertial Navigation System (SINS) & Compass Switching Equipment	b	c	d			Special requirements for SINS gyroscope. See procedure.
4-AS	Sonar Transducers & Domes						Inspect domes for water accumulation. Protecting large domes for transportation may require special instructions from Inventory Manager or Packaging/Transportation Specialist.
4-AT	Steam Turbine			d			
4-AU	Switchboards			d			
4-AV	Valves			d			
4-AW	Winches & Heavy Electro-Hydraulic & Electro-Mechanical Equipment			d			

D. Inspection and Packaging Requirements (cont'd)

1. Footnotes.

a. Follow inspection and packaging guidelines in the General Procedures for all equipments.

b. Equipments or technical handbooks in this category may be classified. Follow special packaging in General Procedures. Do not put classified technical handbooks in the same container with unclassified equipment.

c. Equipments in this category may contain magnetic materials. Packaging for air shipment must conform to MIL-S-4473.

d. Some or all equipments in this category are packaged Method II. Check humidity indicators when inspecting. When repackaging equipment, replace desiccant and indicators.

e. Equipments in this category may be internally pressurized or come in pressurized containers. Check visible pressure gauges when inspecting. Repressurize, when required, in accordance with local procedures and information on container/tag.

f. Mounts on noise-tested equipment must be protected during transit. See individual equipment procedure.

CHAPTER 3. GENERAL PROCEDURES

A. General. Many IPHST actions are common to all, or several, equipments. These common actions are given here. Individual equipment procedures give special needs or exceptions.

B. Inspection.

1. New or Refurbished Equipment. If possible, make the receiving inspection before the shipment is unloaded. Check the shipment against the bill of lading and inspect the condition. Make a visual inspection of containers and sheathing for signs of damage. Also inspect any anchoring hardware, blocks and braces, or other protection which can be seen without opening the packaging. If the equipment is packaged Method II, check the humidity indicators. If the equipment is shipped in a pressurized container, or is internally pressurized, check the installed pressure gauge against the pressure given on the tag or container. If the visual inspection shows damage or improper blue color, call in personnel qualified to make a technical inspection. Examine classified shipments carefully for signs of tampering. Report any such signs at once! Figure 3-1 at the end of this procedure is a checklist for inspecting new equipments. Report defective packaging on DD Form 6 (Figures 3-2 and 3-3).

2. RFI Equipment Turned In. Ready-for-issue (RFI) equipment turned in by users may arrive in conditions which vary from professionally packaged to completely unpackaged. Inspect packaging as for new equipment. Also check any parts of the actual equipment which can be seen. Look for damage, signs of corrosion, obviously missing parts, or anything else which might indicate the condition is not RFI. If condition appears doubtful, call in personnel qualified to make a technical inspection. When the equipment is unpackaged or openings are exposed, check for trapped water and drain if required. When equipment has been returned in its original container, make sure the markings have been changed as needed to show the current condition. For example, does the container show Method II packaging when the equipment is not now packaged Method II?

3. Non-RFI Equipment Turned In. Equipment which is not in ready-for-issue condition when turned in still requires inspection. Inspect packaging, markings, and visible parts of the equipment as for RFI equipment. If the condition code shows the equipment is not repairable, inform the Inventory Manager and request disposition instructions. If the equipment is supposed to be repairable but looks doubtful, call in personnel qualified to make a technical inspection.

3-B-4. Undetermined Condition. If equipment is received in unknown condition, treat it as if it were RFI/repairable until the actual condition has been determined. Call in personnel qualified to make a technical inspection as soon as possible.

5. Follow-Up Actions. If a technical inspection shows that equipment is not in the condition carried in the records, report the change to the Inventory Manager and request instructions. Also report improper packaging. Do not package/repackage equipment unless directed, except that unpackaged equipment must be protected against damage during handling. As a minimum, anchor large items to a pallet or skids; place smaller equipments in an open container with cushioning.

C. Packaging.

1. Complete Preservation-Packaging and Packing. Inventory Managers will seldom request Level A or B preservation-packaging and packing of equipments at any place except the Designated Overhaul Point (DOP). Such a request will usually call out specific methods used by manufacturers and/or DOP's. Request specific instructions if they do not come automatically.

2. Repackaging New or Refurbished Equipment. When the Inventory Manager directs the replacement of damaged or worn-out packaging, do only as much as is needed to restore the original condition. Repair and reuse the original containers and blocking, bracing, and anchoring materiels whenever possible. When replacing Method II packaging, also replace the desiccant and humidity indicator. Repressurize equipment when necessary with the gas indicated on the tag/container to the original pressure. Do not disturb interior preservatives. Patch exterior preservatives only as needed. Replace handbooks, spare parts, etc., in their original location.

3. Minimum Packaging for Shipment. When shipping RFI equipments for reinstallation or non-RFI equipments for refurbishment, packaging must be good enough to protect them from damage and weather. The packaging must also be acceptable under the rules of the transportation means being used. Unless specifically directed otherwise, Commandant does not require preservatives, pressurization, or Method II Preservation-packaging for equipment involved in this kind of shipment. Package to at least the level outlined below.

3-C-3. a. Use the original container which the equipment (or its replacement) came in, if possible. If the original container is not available, make a container which will support and protect the equipment to the same degree as the original container.

b. Tighten all screws, knobs, and clamps and make sure that any locking devices are engaged. Cushion all protrusions, projections, corners, sharp edges, and fragile areas. Cushion as required to protect the equipment and to prevent the puncture or tearing of barrier materiel. Loose excelsior, shredded paper, or other corrosive materiels cannot be used for cushioning unless sealed in waterproof barrier material. Polystyrene (loose fill) materiel may not be used for <u>any</u> packaging or packing application.

c. Anchor large equipment securely to the container base. Add blocking and bracing as needed to prevent equipment damage during handling and shipment.

d. Seal all equipment in waterproof barrier materiel.

e. Usually technical manuals and/or maintenance records turned in with the equipment should be enclosed in a waterproof bag and shipped in the same container. They must not be placed inside the barrier materiel protecting the equipment, but secured where they are readily accessible when the container is opened. If equipment is not classified but the technical manuals are, they should be separately packaged and shipped in accordance with Departmental Regulations.

f. Any detached components, spare parts, or special tools which were turned in with the equipment must be shipped with the main unit. If possible, these items should be packaged in their own interior container(s) and be packed inside the same outer container as the equipment. Secure the parts containers so they cannot damage the equipment during handling and shipment. If it is not practical to ship parts, etc., in the main container, pack them separately and ship on the <u>same</u> bill of lading as the equipment.

4. <u>Special Packing Requirements for Classified Materiel</u>. Seal classified materiel so that container contents cannot be inspected without showing evidence of forcible entry. Reinforce containers with steel strapping or pressure sensitive, reinforced, filament tape. Use steel strapping only on wood, plywood, or wood-cleated containers. Apply strapping perpendicular and parallel to container length. Join the intersections of steel strapping with a strapping seal or clamp, preferably the pressure-clamp type. The clamp must be of a type which will not be damaged by transit or stacking but constructed so that tampering will cause mutilation which can be easily detected.

3-C-5. Container Marking. Include the following markings on containers. (Detailed information is in MIL-STD-129.) Items marked with asterisk (*) may not apply to shipment of used equipment.

a. National Stock Number (NSN) (use manufacturer's part number if NSN unknown).

b. Item Description and Condition.

c. Quantity and Unit of Issue.

d. Contract Number*.

e. Level and Date of Preservation-Packaging. (In cases where an item is being repackaged, ensure that intermediate/interior containers are properly marked.)

f. Gross Weight and Cube.

g. Center of Balance. Mark containers over 10 feet in length, or those which are unbalanced, with the words "CENTER or BALANCE" and vertical lines indicating the center of balance.

h. Sling Points are indicated by the words "SLING HERE".

i. Repackaging.

j. Special Markings (See individual equipment procedures.)

D. Handling.

1. Special Handling Tools/Equipment. Standard forklift trucks or cranes can handle most equipments if proper procedures are observed. Check container or equipment markings for weight, to make sure the handling equipment has enough capacity. If the weight is not marked, check for identical items in inventory. If the weight cannot be found, estimate the maximum it could be and choose equipment accordingly.

3-D-2. Special Handling Procedures and Safety Precautions.

a. Equipment in Containers. Check container markings for special handling instructions. If there are none, observe normal handling procedures and safety precautions for container size and weight. Equipment turned in from the field may not be as well packaged as new equipment and should be handled with extra caution.

b. Unpackaged Equipment. Securely anchor large equipment to pallets or skids for handling. Unpacked equipment is easily damaged. If cranes are used in handling, rig the slings so that no pressure is put on the equipment, but make sure the load is still well-balanced for equipment and personnel safety. Small equipments should be placed in an open container and cushioned against damage or shifting.

E. Storage.

1. Environment. See individual equipment procedures.

2. Segregration. Make sure all equipment is marked with the right materiel condition code before it is placed in storage. If possible, RFI and non-RFI should be stored in different locations to further decrease the chance of accidentally issuing non-RFI materiel. If possible, store unpackaged equipments in an area where they are least likely to be damaged by passing handling equipment. Make sure that technical manuals, maintenance records, or other items received with unpackaged items do not get lost during storage. Individual equipment procedures give any unusual segregation requirements.

3. Shelf Life. Most equipments have an indefinite shelf life when packaged, packed, and stored as specified for new equipment. Exceptions are given in individual procedures. The shelf life for items which are not correctly packaged cannot be predicted and they should be periodically checked for signs of deterioration.

3-F. Transportation.

1. Mode. Unless individual equipment procedures show unusual transportation problems, ship by rail, truck, water or air, as determined by cost and required delivery date.

2. Preparation. Equipment which has been turned in may not be packaged well enough for shipment by mode selected. When planning the shipment of such equipment, check the packaging and re-package as needed.

3. Loading. Handle containers as outlined above. Load in accordance with carrier rules and regulations. Secure containers to prevent shifting or movement. Any equipment shipped or locally moved by an open vehicle, must be shrouded for protection against the weather. If unpackaged equipment is being moved locally for installation or refurbishment, make sure that any other items on the vehicle cannot shift and damage the equipment.

CHAPTER 4. INDIVIDUAL EQUIPMENT INSPECTION, PACKAGING, HANDLING, STORAGE AND TRANSPORTATION PROCEDURES.

A. Air Compressors.

1. Inspection. Include a check of humidity indicators on equipment packaged Method II.

2. Packaging.

a. For Local Handling. Air compressors which are turned in unpackaged must be anchored to a pallet or skids for handling and storage.

b. Special Markings. Special markings to be used on containers of air compressors (as applicable) are:

(1) Desiccant Materials. For Method II packaged air compressors affix the following marking adjacent to specified method markings: "CAUTION - REMOVE PACKAGING TAPE, DESICCANT, AND HUMIDITY INDICATOR FROM EQUIPMENT PRIOR TO OPERATION".

(2) Unpacking Instructions. Stencil the words, "STORE RIGHT SIDE UP - WARNING - SEE PACKING INSTRUCTIONS". In addi- tion, stencil the words "CAUTION - THIS EQUIPMENT MAY BE SERIOUSLY DAMAGED UNLESS UNPACKING INSTRUCTIONS ARE FOLLOWED CAREFULLY. UNPACKING INSTRUCTIONS ARE LOCATED (include location)" adjacent to the identification markings.

(3) Reusable Container. Stencil the words "REUSABLE CONTAINER" on the container.

(4) Technical Manuals. Mark the location of the technical data on the packing list and shipping container.

3. Handling. No unusual handling requirements are necessary for this equipment.

4. Storage.

a. Environment.

CONTROL HUMID W'HOUSE (1)	HEATED W'HOUSE (2) & (3)	UNHEATED W'HOUSE (4)	OPEN COVERED STORAGE	OPEN STORAGE

(1) Store centrifugal-displacement-type motor driven comp- ressors which are not packaged Method II in a controlled humidity area, if possible. This includes non-RFI equipments.

4-A-4. a. (2) Air compressors which are correctly preserved-packaged and unpacked equipment which would normally need only Method III protection.

(3) All air compressors which are not correctly preserved-packaged need a heated warehouse as a minimum storage. If you cannot meet this minimum, store in unheated warehouse and inform the Inventory Manager. Do not, in any case, store this equipment outside.

(4) Suitable alternative storage for correctly packaged equipments.

b. Segregation and Shelf Life. No unusual requirements.

5. Transportation. No unusual requirements.

4-B. Anchor Chain.

1. Inspection. No unusual requirements.

2. Packaging.

   a. For Local Handling. Anchor chain which is turned in unpackaged must be anchored to a pallet or skids for handling and storage.

   b. Special Marketing. New or refurbished anchor chain require these special markings. Include them on used anchor chain as applicable.

      (1) Tags. Provide each shot or length of chain with a stamped corrosion-resistant metal tag attached to the end link with the following information:

         (a) Serial Number.
         (b) Size.
         (c) Length.
         (d) Contract Number.

3. Handling. No unusual handling requirements are necessary for this equipment.

4. Storage.

   a. Environment.

CONTROL HUMID W'HOUSE	HEATED W'HOUSE	UNHEATED W'HOUSE	OPEN COVERED STORAGE	OPEN STORAGE
				X

   b. Segregation and Shelf Life. No unusual requirements.

5. Transportation. Transport anchor chain by rail or water. Rail shipment of large ship anchor chain is by open gondola car.

4-C. Anchors, Marine.

1. Inspection. No unusual requirements.

2. Packaging. Anchors in excess of 25-pounds shall not be boxed, but shipped in secured lifts or in a matter acceptable to the carrier. Secure all movable parts to the anchor stock or shank to prevent movement, dislodgement or loss during handling.

   a. Special Markings. New or refurbished anchors require these special markings.

      (1) Paint or stencil all markings on anchor shank.

      (2) Small boat anchors have the stock number, weight, and serial number stenciled or stamped on metal tags wired to the shank shackle or ring.

3. Handling.

   a. Special Handling Equipment. Some anchors are extremely large and heavy and can only be handled by cranes with heavy lift capabilities. Check lift capabilities before attempting to move these anchors.

   b. Special Handling Procedures. Some anchors are extremely large and heavy. All persons involved in handling of equipment must work together carefully to avoid damage and personal injury.

4. Storage.

   a. Environment.

CONTROL HUMID W'HOUSE	HEATED W'HOUSE	UNHEATED W'HOUSE	OPEN COVERED STORAGE	OPEN STORAGE
				X

   b. Segregation and Shelf Life. No unusual requirements.

5. Transportation. Anchors may be shipped by any mode, but the size and weight of some of the anchors may severely limit the vehicles which can carry them. Special permits may be required by local authorities and/or arrangements made to get special right-of-way clearance.

4-D. Antennas and Antenna Components.

1. Inspection. Include a check of humidity indicators on components packaged Method II.

2. Packaging.

   a. For Local Handling. Antennas and large antenna components must be anchored to a pallet of skids for local handling and storage. Make sure anchoring devices do not put pressure on antenna elements! Cushion smaller antenna components in open containers.

   b. Minimum Packaging for Shipment. Include special packing requirements when shipping classified materiel. Ship classified technical manuals separately from unclassified antennas.

   c. Special Markings. Use the following special markings on antenna and antenna component containers as applicable.

      (1) Desiccant Materiels. Affix the following marking adjacent to specified method markings on Method II packages: "CAUTION - REMOVE PACKAGING TAPE, DESICCANT, AND HUMIDITY INDICATOR FROM EQUIPMENT PRIOR TO OPERATION".

      (2) Unpacking Instructions. Stencil the words, "CAUTION - THIS EQUIPMENT MAY BE SERIOUSLY DAMAGED UNLESS UNPACKING INSTRUCTION ARE FOLLOWED CAREFULLY. UNPACKING INSTRUCTION ARE LOCATED (include location)" adjacent to the identifi- cation markings.

      (3) Technical Manual. Mark the location of the technical data on the packing list and shipping container.

      (4) Classified Shipments. Do not affix packing lists to the outside of the container for classified materiel. Forward in accordance with Department Regulations.

3. Handling. Handle antennas with extreme care, especially when unpackaged. Antenna parts are critical and repair of even slight damage is very expensive. Never lift antennas by the elements or a single point on the frame.

4. Storage.

   a. Environment.

CONTROL HUMID W'HOUSE	HEATED W'HOUSE	UNHEATED W'HOUSE	OPEN COVERED STORAGE	OPEN STORAGE
(1)	(2) &(3)	(4)	(5)	

4-D-4. a. (1) Store critical antenna sections and pedestals which are not packaged Method II in a controlled humidity areas, if possible. This includes non-RFI.

(2) Critical antenna sections and pedestals which are not packaged method II (include non-RFI) need a heated warehouse as a minimum storage. If you cannot meet this minimum, store in unheated warehouse and inform the Inventory Manager. Do not, in any case, store this equipment outside.

(3) Store antenna horns and elements in a heated warehouse even when correctly preserved-packaged (Method IC). This includes non-RFI.

(4) Store components packaged Method II and antenna requiring only physical protection in as unheated warehouse or better if at all possible.

(5) If antenna size and lack of storage space force outside storage, the antenna must be covered and well-protected from weather. If at all possible this outside storage should be limited to antennas which require only physical protection and which are completely crated.

NOTE: Some radar antennas need A.C. power during storage. Inspect and maintain these antennas as specified in the technical data accompanying the equipment.

b. Segregation. Store classified equipment and/or technical manuals in designated areas.

5. Transportation.

a. Mode. Ship classified materials in accordance with Department Regulations.

b. Loading. Do not use antenna elements/frames as tie-down points to secure the load. Severe damage has been caused by this practice.

4-E. Auxiliary Power Unit (Helicopter).

1. Inspection. Include a check of humidity indicators on equipment packaged Method II. Check pressure gauge on pressurized equipment to ensure pressure is not less than approximately three pounds per square inch.

2. Packaging.

   a. For Local Handling. Auxiliary power units which are turned in unpackaged must be anchored to a pallet or skids for handling and storage.

   b. Minimum Packaging for Shipment. Noise-tested power units should always be shipped in the mount protection devices in which they are shipped be the manufacturer. If these original devices are not available, the packer must devise a way to immobilize the resilient mounts in an unstrained position and to protect them from damage.

   c. Pressurization. Containers which need repressurization should be charged with clean compressed air free of liquid water to a pressure of five pounds per square inch.

   d. Special Markings. These special markings apply to packaged auxiliary power units.

      (1) Identifications. Mark the container on the same side as the humidity indicator with the following information:
      Auxiliary Power Unit (Helicopter)
      Model Number
      Power Unit Serial Number
      Contract or Order Number
      Name of Manufacturer
      Name of Contractor (if different from manufacturer)
      Exhaust Cone (is, or is not) included

      (2) Desiccant Material. Affix the following marking adjacent to specified method markings: "CAUTION - REMOVE PACKAGING TAPE, DESICCANT, AND HUMIDITY INDICATOR FROM EQUIPMENT PRIOR TO OPERATION".

      (3) Unpacking Instructions. Stencil the words, "CAUTION - THIS EQUIPMENT MAY BE SERIOUSLY DAMAGED UNLESS UNPACKING INSTRUCTIONS ARE FOLLOWED CAREFULLY. UNPACKING INSTRUCTIONS ARE LOCATED (include location)" adjacent to the identification markings.

      (4) Reusable Container. Stencil the word "REUSABLE CONTAINER" on the container.

      (5) Pressure-Charged Equipment. Mark the container to indicate the system is pressurized to five pounds per square inch with clean compressed air.

4-E-2 d. (6) Noise-Tested Equipment. Mark containers for noise-tested equipment "SENSITIVE. NOISE-TESTED UNIT. HANDLE WITH CARE". Stencil the words: "THIS END UP", together with an arrow indicating the top of the container, on all sides of the container.

(7) Technical Manuals. Mark the location of the technical data on the packing list and shipping container.

(8) Metal Containers. When the auxiliary power unit is packed in a metal container, apply the following markings: "DO NOT BREAK THE SEALS ON THIS CONTAINER UNTIL READY FOR USE UNLESS INSPECTION OF THE INTERIOR HUMIDITY INDICATOR SHOWS RENEWAL OF DEHYDRATING AGENT OR REPRESERVATION TO BE NECESSARY."

3. Handling. Most auxiliary power units are extremely large and heavy and can only be handled by cranes with heavy lift capabilities. Check lift capabilities before attempting to move these engines.

4. Storage.

a. Environment.

CONTROL HUMID W'HOUSE (1)	HEATED W'HOUSE (2)	UNHEATED W'HOUSE (3)	OPEN COVERED STORAGE	OPEN STORAGE

(1) Store auxiliary power units which are not packaged Method II in a controlled humidity area, if possible. This includes non-RFI engines.

(2) Power units which are not packaged Method II (includes non-RFI) need a heated warehouse as a minimum storage. If you cannot meet this minimum, store in unheated warehouse and inform the Inventory Manager. Do not, in any case, store this equipment outside.

4-E-4. a. (3) Store power units which are not correctly packaged in an unheated warehouse or better. Do not remove desiccant from Method II packages. Leave inspection ports accessible for periodic checks of humidity indicators and pressure gages.

b. Shelf Life. Some resilient mounts have service/shelf lives. Check technical manuals for specifics.

5. Transportation. Auxiliary power units may be shipped by any mode.

4-F. Battery, Primary (Air Depolarized).

1. Inspection.

   a. Notify the user immediately; if possible have user present for inspection.

   b. Inspect for the following.

      (1) Leakage - electrolyte leakage, stain on shipping container.

      (2) Damage - visible damage from leakage, shock, excess stacking, breakage, broken pallets or banding.

      (3) Orientation - liquid electrolyte batteries shall be upright on receipt.

   c. Initiate procedure against carrier for shipping damage.

2. Packaging.

   a. Primary batteries containing liquid electrolyte shall be enclosed in a heavy duty plastic bag impervious to the electrolyte and reaction by products. This plastic bag shall remain on the battery throughout its life.

   b. Deactivated primary batteries (activated by user adding water) are sealed inside the plastic bag to prevent entry of moisture.

   c. Each battery with bag shall be enclosed in a cardboard box with the following markings:

      (1) Fragile, Handle with Care

      (2) This End Up

      (3) Poison, Caustic Materiel

      (4) Do Not Drop

      (5) Shelf Life Expiration Date (Day, Month, Year).

   d. Buoy power units are plywood racks containing individual batteries prewired for 12 volt operation. Each power unit shall have the markings listed in 3. above and the following: "LIFT HERE."

4-F-2. e. Each power unit shall have a lifting eye attached at the top.

f. Batteries or Power Units are shipped on strong wooden pallets and banded together to prevent movement or upset.

3. Storage.

a. Environment.

CONTROL HUMID W'HOUSE	HEATED W'HOUSE	UNHEATED W'HOUSE	OPEN COVERED STORAGE	OPEN STORAGE
	b			

b. Storage Environmental Limitations. Store in a clean, dry warehouse with temperatures maintained between 32(o)F and 80(o)F. Excess heat is detrimental to the chemical properties of air-depolarized batteries and shall be avoided.

c. Segregation and Shelf Life. Aid to Navigation batteries shall be segregated from lead acid storage batteries. Batteries shall be stored so that those having the least remaining shelf life will be used first.

4. Transportation.

a. Air shipment of liquid electrolyte (preactivated) primary batteries is prohibited.

b. Batteries shall be transportated in the upright position at all times.

4-G. Battery, Primary (Dry Cell).

1. Inspection.

   a. Notify the user immediately; if possible have present for inspection.

   b. Inspect for the following:

      (1) Leakage - electrolyte leakage, stain on shipping container.

      (2) Damage - visible damage from leakage, shock, excess stacking, breakage, broken pallets or banding.

   c. Initiate procedure against carrier for shipping damage.

2. Packaging.

   a. Each battery shall be enclosed in a cardboard box with the following markings:

      (1) Fragile, Handle with Care

      (2) Do Not Drop

      (3) Shelf life expiration date (mo-yr)

   b. Ice Buoy Battery Power Units.

      (1) Ice buoy power units are metal cans containing batteries prewired for 12 volt operation. Each power unit shall have the markings listed in 1. above and the following: "LIFT HERE."

   c. Batteries or power units are shipped on strong wooden pallets and banded together to prevent movement or upset.

3. Storage.

   a. Environment.

CONTROL HUMID W'HOUSE	HEATED W'HOUSE	UNHEATED W'HOUSE	OPEN COVERED STORAGE	OPEN STORAGE
	X*			

4-G-3. *b. Storage Environment Limitations. Store in a clean, dry warehouse with temperatures maintained between 32(o)F and 80(o)F. Heat is detrimental to the chemical properties of dry cell batteries and shall be avoided. Ice buoy and emergency dry cell batteries have short shelf life expectancy and are best stored at 40(o)F until use.

c. Segregation and Shelf Life. Aid to Navigation batteries shall be segregated from lead acid storage batteries. Batteries shall be stored so that those having the least remaining shelf life will be used first.

4. Transportation. No unusual requirements.

4-H. Battery, Storage (Lead-Acid).

1. Inspection.

   a. Notify the user immediately; if possible have user present for inspection.

   b. Inspect for the following:

      (1) Leakage - electrolyte leakage

      (2) Damage - visible damage from leakage, shock, excess stacking, breakage, broken crating, etc.

      (3) Orientation -liquid electrolyte batteries shall be upright on receipt.

   c. Initiate procedure against carrier for shipping damage.

2. Packaging.

   a. Lead acid storage batteries shall be packaged in a heavy duty wooden packing crate.

   b. The following markings shall be visible.

      (1) Fragile, Handle with Care

      (2) This End Up

      (3) Do Not Drop

      (4) Poison, acid electrolyte

3. Handling.

   a. Batteries shall remain in the packing crate during storage.

   b. Charging of storage batteries at facilities other than authorized battery charging shops is not permitted.

   c. Handling personnel shall be aware of hazardous chemicals and cognizant of safety measures.

4-H-4. Storage.

a. Environment.

CONTROL HUMID W'HOUSE	HEATED W'HOUSE	UNHEATED W'HOUSE	OPEN COVERED STORAGE	OPEN STORAGE
	X*			

*b. Storage Environment Limitations. Store in a clean dry warehouse with temperatures maintained between 32(o)F and 80(o)F. Excess cold or hot temperature results in reduction of battery capacity and shall be avoided.

c. Segregation and Shelf Life. Lead acid batteries shall be stored in a location which is segregated from all other types of batteries, primary or secondary due to the corrosive nature of the sulphuric acid fumes. Lead acid batteries shall not be stored longer than 90 days as they generally have high self discharge and may suffer irreparable damage when standing at low capacity. Never store lead acid batteries on a cold damp floor.

5. Transportation.

a. Air shipment of liquid electrolyte storage batteries is prohibited.

b. Batteries shall be transported in the upright position at all times.

4-I. Battery, Storage (Nickel Cadmium).

1. Inspection.

   a. Notify the user immediately; if possible have user present for inspection.

   b. Inspect for the following:

      (1) Leakage - electrolyte leakage

      (2) Damage - visible damage from leakage, shock, excess stacking, breakage, broken crating, etc.

      (3) Orientation - liquid electrolyte batteries shall be upright on receipt.

   c. Initiate procedure against carrier for shipping damage

2. Packaging.

   a. Storage batteries shall be packaged in a heavy duty wooden packing crate.

   b. The following markings shall be visible:

      (1) Fragile, Handling with Care

      (2) This End Up

      (3) Do Not Drop

      (4) Poison, Caustic Electrolyte

3. Handling.

   a. Batteries shall remain in the packing crate during storage.

   b. Charging of storage batteries at facilities other than authorized battery charging shops is not permitted.

   c. Handling personnel shall be aware of hazardous chemicals and cognizant of safety measures.

4-I-4. Storage.

a. Environment.

CONTROL HUMID W'HOUSE	HEATED W'HOUSE	UNHEATED W'HOUSE	OPEN COVERED STORAGE	OPEN STORAGE
	b*			

b. *Storage Environment Limitations. Store in a clean dry warehouse with temperatures maintained between 32 F and 80 F. Excess cold or hot temperatures result in reduction of battery capacity and shall be avoided.

c. Nickel cadmium batteries shall be stored in a separate area from lead-acid batteries. Nickel cadmium batteries may be stored charged or discharged for long periods without damage.

5. Transportation.

a. Air shipment of liquid electrolyte storage batteries is prohibited.

b. Batteries shall be transported in the upright position at all times.

4-J. Bearings, Ball And Roller, Oil Impregnated (Oilite) And Sleeve Type (Metal And Non-Metal).

1. Inspection. No unusual requirements.

2. Packaging.

a. Repackaging New or Refurbished Bearings. Repackaging new or refurbished ball and roller bearings is limited to replacing outer or intermediate containers. If unit packages have been ruptured the bearings are classified non-RFI. They may be returned to RFI condition after cleaning and repackaging by specialized contract packaging houses that certify compliance with the requirements of MIL-B-197.

b. Special Markings. Special Markings to be used on containers of bearing are:

(1) Unpacking Instructions. Stencil the words, "CAUTION - THIS EQUIPMENT MAY BE SERIOUSLY DAMAGED UNLESS UNPACKING INSTRUCTION ARE FOLLOWED CAREFULLY. UNPACKING INSTRUCTION ARE LOCATED (include location)" adjacent to the identification markings.

3. Handling. No unusual requirements.

4. Storage.

a. Environment.

CONTROL HUMID W'HOUSE	HEATED W'HOUSE	UNHEATED W'HOUSE	OPEN COVERED STORAGE	OPEN STORAGE
		X		

b. Segregation and Shelf Life. No unusual requirements.

5. Transportation. No unusual requirements.

4-K. Boilers, Steam, And Related Equipment.

1. Inspection. Include a check of humidity indicators on equipment packaged Method II.

2. Packaging.

   a. For Local Handling. Small equipment turned in unpackaged must be cushioned in open containers for handling and storage. Anchor larger items to a pallet or skids.

   b. Special Markings. Special markings to be used on containers of boiler and related equipment (as applicable) are:

      (1) Desiccant Materiels. For method II packaged equipments affix the following marking adjacent to specified method markings: "CAUTION - REMOVE PACKAGING TAPE, DESICCANT, AND HUMIDITY INDICATOR FROM EQUIPMENT PRIOR TO OPERATION".

      (2) Unpacking Instructions. Stencil the words, "CAUTION - THIS EQUIPMENT MAY BE SERIOUSLY DAMAGED UNLESS UNPACKING INSTRUCTIONS ARE FOLLOWED CAREFULLY. UNPACKING INSTRUCTIONS ARE LOCATED (include location)" adjacent to the identification markings.

      (3) Technical Manuals. Mark the location of the technical data on the packing list and shipping container.

3. Handling. No unusual handling requirements are necessary for this equipment.

4. Storage.

   a. Environment.

CONTROL HUMID W'HOUSE	HEATED W'HOUSE	UNHEATED W'HOUSE	OPEN COVERED STORAGE	OPEN STORAGE
(1)	(2)	(3)&(4)		

      (1) Store boiler related equipments which should have Method II protection, but do not, in a controlled humidity area, if possible. This includes non-RFI equipments.

      (2) All boiler related equipments which should have Method II protection, but do not, need a heated warehouse as a minimum storage. If you cannot meet this minimum, store in unheated warehouse and inform the Inventory Manager. Do not, in any case, store this equipment outside.

4-K-4. a. (3) Store boiler related equipments which are packaged Method II in an unheated warehouse or better. Do not remove desiccant. Leave inspection ports accessible for periodic checks of humidity indicators.

(4) All equipment which do not require Method II protection, whether correctly preserved-packaged or not.

b. Segregation and Shelf Life. No unusual requirements.

5. Transportation. No unusual requirements.

4-L. Cable, Cord, And Wire Assemblies.

1. Inspection. Check wood reels and lagging for rotting or insects. Check steel reels for rust.

2. Packaging.

   a. Assemblies Awaiting Refurbishment. Special purpose cable assemblies turned in for refurbishment should be wound on reels or coiled in containers. Make the coils big enough so that the cable is not permanently deformed or broken.

   b. Special Markings. Special markings to be used on containers of cable, cord and wire assemblies (as applicable) are:

      (1) Year Marking. Mark reels with a keyed series of colors to indicate the year of manufacturing. The colored stripe is applied over the lagging or covering. In addition to the strip, stencil both flanges of the reel with figures to show the year of manufacture.

      (2) Lead-Sheathed Cable. Mark reels of lead-sheathed cable "KEEP UPRIGHT. DO NOT LAY ON SIDE".

      (3) Reel Number

      (4) Size of Cable

      (5) Contractor's Name

      (6) Manufacturer's Name (if other than contractor)

3. Handling. Never handle reels with a forklift. Lift reels only with a crane, using a lift sling on a shaft through the reel hub. Use a spreader bar to prevent strain on reel flanges.

4. Storage.

   a. Environment.

CONTROL HUMID W'HOUSE	HEATED W'HOUSE	UNHEATED W'HOUSE	OPEN COVERED STORAGE	OPEN STORAGE
		b*		

   b. *Store reels with flanges vertical. Smaller reels may be stacked two high (flanges vertical) when racks or frames provide stability.

   c. Segregation and Shelf Life. No unusual requirements.

5. Transportation. No unusual requirements.

4-M. Communication And Electronic Components.

1. Inspection. Include a check of humidity indicators on equipment packaged Method II. Check whether the equipment or technical manuals are classified. Check whether the equipment contains magnetic materiels.

2. Packaging.

   a. For Local Handling. Small equipments turned in unpackaged must be cushioned in open containers for handling and storage. Anchor larger items to a pallet or skids. Classified equipment may require further covering or packaging depending on local storage conditions.

   b. Minimum Packaging for Shipment.

      (1) Include special packing requirements when shipping classified materiel.

      (2) When equipment which contains magnetic materiels is to be air shipped, the shielding requirements on MIL-S-4473 must be observed.

   c. Special Markings. Special markings to be used on containers of communications and electronic components (as applicable) are

      (1) Desiccant Materiels. Affix the following marking adjacent to specific method markings: "CAUTION - REMOVE PACKAGING TAPE, DESICCANT, AND HUMIDITY INDICATOR FROM EQUIPMENT PRIOR TO OPERATION".

      (2) Unpacking Instructions. Stencil the words, "CAUTION - THIS EQUIPMENT MAY BE SERIOUSLY DAMAGED UNLESS UNPACKING INSTRUCTIONS ARE FOLLOWED CAREFULLY. UNPACKING INSTRUCTIONS ARE LOCATED (include location)" adjacent to the identification markings.

      (3) Technical Manuals. Mark the location of the technical data on the packing list and shipping container.

      (4) Magnetic Materiels. When magnetic materiel is packed, affix red labels with white letter "MAGNETIC MATERIEL" on two opposite sides of the container.

      (5) Fragile Equipment. Place the word "FRAGILE" ON THE container by labeling, stenciling or stamping.

4-M c. (6) Classified Shipments. Do not affix packing lists to the outside of the container for classified materiel. Forward in accordance with Departmental Regulations.

3. Handling. No special requirements. Use extra care with fragile items.

4. Storage.

a. Environment.

CONTROL HUMID W'HOUSE (1)	HEATED W'HOUSE (2)&(3)	UNHEATED W'HOUSE (4)	OPEN COVERED STORAGE	OPEN STORAGE

(1) Store equipment for which Method IC or II protection is required but not accomplished, in a controlled humidity area, if possible. This includes non-RFI equipments.

(2) Equipments which are correctly preserved-packaged Method IC.

(3) Units which are not packaged Method IC or II (includes non-RFI) need a heated warehouse as a minimum storage. If you cannot meet this minimum, store in unheated warehouse and inform the Inventory Manager. Do not, in any case, store the equipment outside.

(4) Store units which are packaged Method III in an unheated warehouse or better. Do not remove desiccant. Leave inspection ports accessible for periodic checks or humidity indicator.

b. Segregation. Store magnetic materiel and classified equipment in designated storage areas.

c. Shell Life. No unusual requirements.

5. Transportation. Ship classified materiel in accordance with Departmental Regulations. Shipment of magnetic materiel by air must conform to MIL-S-4473.

4-N. Computers And Allied Equipments.

1. Inspection. Include a check of humidity indicators on equipment packaged Method II.

2. Packaging.

   a. For Local Handling. Computers and allied equipments which are turned in unpackaged must be anchored to a pallet or skids (or cushioned in an open container for smaller components) for handling and storage.

      (1) Unpacking Instructions. Stencil the words, "CAUTION-THIS EQUIPMENT MAY BE SERIOUSLY DAMAGED UNLESS UNPACKING INSTRUCTIONS ARE FOLLOWED CAREFULLY. UNPACKING INSTRUCTIONS ARE LOCATED (include location)" adjacent to the identification markings.

      (2) Technical Manuals. Mark the location of the technical data on the packing list and shipping container.

      (3) Fragile. Place the word "FRAGILE" on the container by labeling, stenciling or stamping.

3. Handling. No unusual handling requirements are necessary for this equipment. Use extra care with fragile items.

4. Storage.

   a. Environment.

CONTROL HUMID W'HOUSE	HEATED W'HOUSE	UNHEATED W'HOUSE	OPEN COVERED STORAGE	OPEN STORAGE
(1)	(2)	(3)		

      (1) Store computers and allied equipments which are not packaged Method II in a controlled humidity area, if possible. This includes non-RFI equipments.

      (2) All computers and allied equipments which are not correctly preserved-packaged need a heated warehouse as a minimum storage. If you cannot meet this minimum, store in unheated ware-house and inform the Inventory Manager. Do not, in any case, store this equipment outside.

      (3) Store computers and allied equipment which are packaged Method II in an unheated warehouse or better. Do not remove desiccant. Leave inspection ports accessible for periodic check of humidity indicators.

4-N-4. b. Segregation and Shelf Life. No unusual requirements.

5. Transportation. No unusual requirements.

4-O. Consoles, Displays And Control Units.

1. Inspection. Include a check of humidity indicators on equipment packaged Method II. Check whether the equipment contains magnetic materials. Check whether the equipment or technical manuals are classified.

2. Packaging.

   a. For Local Handling. Small equipments turned in unpackaged must be cushioned in open containers for handling and storage. Anchor large items to a pallet or skids. Classified equipment may require further covering or packaging depending on local storage conditions.

   b. Minimum Packaging for Shipment.

      (1) When equipment which contains magnetic materials is to be air shipped, the shielding requirements of MIL-S-4473 must be observed.

      (2) Include special packing requirements when shipping classified materiel.

      (3) Special Markings. These special container markings apply to packaged consoles, displays, and control units.

         (a) Desiccant Materials. Affix the following marking adjacent to specified method markings: "CAUTION - REMOVE PACKAGING TAPE, DESICCANT, AND HUMIDITY INDICATOR FROM EQUIPMENT PRIOR TO OPERATION".

         (b) Unpacking Instructions. Stencil the words, "CAUTION - THIS EQUIPMENT MAY BE SERIOUSLY DAMAGED UNLESS UNPACKING INSTRUCTIONS ARE FOLLOWED CAREFULLY. UNPACKING INSTRUCTIONS ARE LOCATED (include location)" adjacent to the identification markings.

         (c) Technical Manuals. Mark the location of the technical data on the packing list and shipping container.

         (d) Classified Shipments. Do not affix packing lists to the outside of the container for classified materiel. Forward in accordance with Departmental Regulations.

         (e) Magnetic Materials. When magnetic materiel is packed, affix red labels with white letters "MAGNETIC MATERIEL" on two opposite sides of the container.

4-0-2. (3) (F) Fragile Equipments. Place the word "FRAGILE" on the container by labeling, stenciling or stamping..

3. Handling. No special requirements. Use extra care with fragile items.

4. Storage.

a. Environment.

CONTROL HUMID W'HOUSE (1)	HEATED W'HOUSE (2)	UNHEATED W'HOUSE (3)	OPEN COVERED STORAGE	OPEN STORAGE

(1) Store units which are not packaged Method II in a controlled humidity area, if possible. This includes non-RFI units.

(2) Units which are not packaged Method II (includes non-RFI) need a heated warehouse as a minimum storage. If you can-not meet this minimum, store in unheated warehouse and inform the Inventory Manager. Do not, in any case, store this equipment outside.

(3) Store units which are packaged Method II in an unheated warehouse or better. Do not remove desiccant. Leave humidity indicators accessible for periodic checks.

b. Segregation. Store magnetic materiel and classified equipment in designated areas.

c. Shelf Life. Some resilient mounts have service/shelf lives. Check technical manuals for specifics.

5. Transportation. Ship classified materiels in accordance with Departmental Regulations. Shipment of magnetic materiels by air must conform to MIL-S-4473.

4-P. Distilling Units, Water.

1. Ispection. No unusual requirements.

2. Packaging.

a. For Local Handling. Distilling units which are turned in unpackaged must be anchored to a pallet or skids for handling and storage.

b. Special Markings. Special markings to be used on containers of distilling units are:

(1) Unpacking Instructions. Stencil the words, "CAUTION - THIS EQUIPMENT MAY BE SERIOUSLY DAMAGED UNLESS UNPACKING INSTRUCTIONS ARE FOLLOWED CAREFULLY. UNPACKING INSTRUCTIONS ARE LOCATED (include location)" adjacent to the identification markings.

(2) Special Handling. Thermocompress-type distilling units are marked: "CRITICAL, HIGH VALUE, CLOSE TOLERANCE OPERATING EQUIPMENT - HANDLE WITH EXTREME CARE - AVOID UNNECESSARY MOVEMENTS, JARRING, ETC."

(3) Arrows. Stencil the words "THIS SIDE UP" with an arrow towards the top of the container.

(4) Technical Manuals. Mark the location of the technical data on the packing list and shipping container.

3. Handling. No unusual handling requirements are necessary for this equipment.

4. Storage.

a. Environment.

CONTROL HUMID W'HOUSE	HEATED W'HOUSE (1)	UNHEATED W'HOUSE (2)	OPEN COVERED STORAGE	OPEN STORAGE

(1) Distilling units which are not preserved or packaged require a heated warehouse as a minimum storage. If you cannot meet this minimum, store in unheated warehouse and inform the Inventory Manager. Do not, in any case, store this equipment outside.

4-P-4. a. (2) Store equipment wich is correctly packaged in a unheated warehouse or better.

b. Segregation and Shelf Life. No unusual requirements.

5. Transportation. No unusual requirements.

For Local Handling. Electric motors and generators which are turned in unpackaged must be anchored to a pallet or skids (or cushioned in an open container for smaller components) for handling and storage.

b. Minimum Packaging for Shipment. Noise-tested units should always be shipped in the mount protection devices in which they were shipped by the manufacturer. If these original devices are not available, the packer must devise a way to immobilize the resilient mounts in an unstrained position and protect them from damage.

c. Special Markings. Special markings to be used on containers of electric motors and generators (as applicable) are:

(1) Desiccant Materiels. For Method II packaged equipment affix the following marking adjacent to specified method markings: "CAUTION - REMOVE PACKAGING TAPE, DESICCANT, AND HUMIDITY INDICATOR FROM EQUIPMENT PRIOR TO OPERATION".

(2) Unpacking Instructions. Stencil the words, "CAUTION - THIS EQUIPMENT MAY BE SERIOUSLY DAMAGED UNLESS UNPACKING INSTRUCTIONS ARE FOLLOWED CAREFULLY. UNPACKING INSTRUCTIONS ARE LOCATED (included location)" adjacent to the identification markings.

(3) Reusable Container. Stencil the words "REUSABLE CONTAINER" on the container.

(4) Noise-Tested Equipment. Mark Containers for noise-tested units "SENSITIVE. NOISE-TESTED UNIT. HANDLE WITH CARE." The words "THIS END UP" together with an arrow indicating the top of the container stenciled on all sides of the container.

(5) Technical Manuals. Mark the location of the technical data on the packing list and shipping container.

2. Handling. No unusual handling requirements are necessary for this equipment.

4-Q.3. Storage.

a. Environment.

CONTROL HUMID W'HOUSE	HEATED W'HOUSE	UNHEATED W'HOUSE	OPEN COVERED STORAGE	OPEN STORAGE
(1)	(2)	(3)&(4)		

(1) Store motors and generators which should have Method II protection, but do not, in a controlled humidity area if possible. This includes non-RFI equipments.

(2) All motors and generators which call for Method II but are not packaged Method II (includes non-RFI) need a heated warehouse as a minimum storage. If you cannot meet this minimum, store in unheated warehouse and inform the Inventory Manager. Do not, in any case, store this equipment outside.

(3) Store motors and generators which are packaged Method II in an unheated warehouse or better. Do not remove desiccant. Leave inspection ports accessible for periodic checks of humidity indicators.

(4) Equipment normally packaged Method III, whether correctly packaged or not.

4. Segregation. No unusual requirements.

a. Shelf LIfe. Some resilient mounts have service/shelf lives. Check technical manuals for specifics.

5. Transportation. No unusual requirements.

4-R. Electrical Components And Devices.

1. Inspection. Include a check of humidity indicators on equipment packaged Method II.

2. Packaging.

   a. For Local Handling. Small equipments turned in unpackaged must be cushioned in open containers for handling and storage. Anchor larger items to a pallet or skids.

   b. Special Markings. These special markings may apply to packaged electrical components and devices.

      (1) Desiccant Materials. Affix the following marking adjacent to specific method markings on all Method II containers: "CAUTION - REMOVE PACKAGING TAPE, DESICCANT, AND HUMIDITY INDICATOR FROM EQUIPMENT PRIOR TO OPERATION".

      (2) Reusable Container. Stencil the words "REUSABLE CONTAINER" on the container.

      (3) Technical Manuals. Mark the location of the technical data on the packing list and shipping container.

      (4) Fragile Equipment. Place the word "FRAGILE" on the container by labeling, stenciling or stamping.

      (5) Radioactive Materiels. Mark in accordance with NAVSUP Publication 505, Packaging and Materiels Handling - Preparation of Hazardous Materiels for Military Air Shipment.

3. Handling. No special requirements. Use extra care with fragile items.

4. Storage.

   a. Environment.

CONTROL HUMID W'HOUSE	HEATED W'HOUSE	UNHEATED W'HOUSE	OPEN COVERED STORAGE	OPEN STORAGE
(1)	(2)&(3)	(4)&(3)		

      (1) Store equipments which should be packaged Method IC or II, but are not, in a controlled humidity area if possible. This includes non-RFI equipments.

4-R-4. a. (2) Equipments which are correctly packaged Method IC.

(3) Equipments which should be packaged Method IC or II, but are not, (includes non-RFI) need a heated warehouse as a minimum storage. If you cannot meet this minimum, store in unheated warehouse and inform the Inventory Manager. Do not, in any case, store this equipment outside.

(4) Store equipments which are correctly preserved-packaged Method II in an unheated warehouse. Do not remove desiccant. Leave humidity indicators accessible for periodic checks.

(3) Equipment normally packaged Method III, whether correctly packaged or not.

b. Segregation and Shelf Life. No unusual requirements.

5. Transportation. No unusual requirements.

4-S. Emergency Equipment.

1. Inspection. No unusual requirements.

2. Packaging. No preservatives, lubricants, hydrocarbons, or similar substances shall come in contact with pressure containing parts of compressed gas cylinders filled with oxygen or flammable gasses.

   a. Special Markings. Special markings to be used on containers of emergency equipments are:

      (1) Personal Flotation Devices. Date of manufacture, month and year.

3. Handling. No unusual handling requirements are necessary for this equipment.

4. Storage.

   a. Environment.

CONTROL HUMID W'HOUSE (1)	HEATED W'HOUSE (2)	UNHEATED W'HOUSE (3)	OPEN COVERED STORAGE	OPEN STORAGE

      (1) Store emergency equipment which should have Method I protection, but does not, in a controlled humidity warehouse, if possible. This includes non-RFI.

      (2) Emergency equipment which should be packaged Method I, but is not, (includes non-RFI) needs a heated warehouse as a minimum storage. If you cannot meet this minimum, store in unheated warehouse and inform the Inventory Manager. Do not, in any case, store this equipment outside.

      (3) Suitable storage for all other equipment, packaged or unpackaged.

   b. Segregation and Shelf Life. Some personal flotation devices have a shelf life. Check with Inventory Manager.

5. Transportation. No unusual requirements.

4-T. Engines, Aircraft.

1. Inspection. Include a check of humidity indicators on equipment packaged Method II. Check pressure gauge on pressurized equipment to ensure pressure is not less than approximately three pounds per square inch.

2. Packaging.

   a. For Local Handling. Aircraft engines which are turned in unpackaged must be anchored to a pallet or skids for handling and storage.

   b. Minimum Packaging for Shipment. Noise-tested aircraft engines should always be shipped in the mount protection devices in which they are shipped by the manufacturer. If these original devices are not available, the packer must devise a way to immobilize the resilient mounts in an unstrained position and protect them from damage.

   c. Pressurization. Containers which need repressurization should be charged with clean compressed air free of liquid water to a pressure of five pounds per square inch.

   d. Special Markings. These special markings apply to packaged aircraft engines.

      (1) Identification. Mark the container on the same side as the humidity indicator with the following information:
      Engine, Aircraft
      Model Number
      Engine Serial Number
      Contract or Order Number
      Name of Manufacturer
      Name of Contractor (if different from manufacturer)
      Exhaust Cone (is, or is not) included

      (2) Desiccant Materiel. Stencil the words: "CAUTION - REMOVE PACKAGING TAPE, DESICCANT, AND HUMIDITY INDICATOR FROM EQUIPMENT PRIOR TO OPERATION".

      (3) Unpacking Instructions. Stencil the words: "CAUTION - THIS EQUIPMENT MAY BE SERIOUSLY DAMAGED UNLESS UNPACKING INSTRUCTIONS ARE FOLLOWED CAREFULLY. UNPACKING INSTRUCTIONS ARE LOCATED (included location)" adjacent to the identification markings.

4-T-2. (4) Reusable Container. Stencil the word: "REUSABLE CONTAINER" on the container.

(5) Pressure-Charged Equipment. Mark the container to indicate the system is pressurized to five pounds per square inch with clean compressed air.

(6) Noise-Tested Equipment. Mark containers for noise-tested equipment "SENSITIVE. NOISE-TESTED UNIT. HANDLE WITH CARE." Stencil the words: "THIS END UP", together with an arrow indicating the top of the container on all sides of the container.

(7) Technical Manuals. Mark the location of the technical data on the packing list and shipping container.

(8) Metal Containers. When the aircraft engine is packed in a metal container, apply the following markings: "DO NOT BREAK SEALS ON THIS CONTAINER UNTIL READY FOR USE UNLESS INSPECTION OF THE INTERIOR HUMIDITY INDICATOR SHOWS RENEWAL OF DEHYRATING AGENT OR REPRESERVATION TO BE NECESSARY."

3. Handling. Most aircraft engines are extremely large and heavy and can only be handled by cranes with heavy lift capabilities. Check lift capabilities before attempting to move these engines.

4. Storage.

a. Environment.

CONTROL HUMID W'HOUSE	HEATED W'HOUSE	UNHEATED W'HOUSE	OPEN COVERED STORAGE	OPEN STORAGE
(1)	(2)	(3)		(3)

(1) Store aircraft engines which are not packaged Method II in a controlled humidity area if possible. This includes non-RFI engines.

(2) Engines which are not packaged Method II (includes non-RFI) needs a heated warehouse as a minimum storage. If you cannot meet this minimum, store in unheated warehouse and inform the Inventory Manager. Do not, in any case, store this equipment outside.

4-T-4. a. (3) Store engines which are correctly packaged in open storage or better. Do not remove desiccant from Method II packages. Leave inspection ports accessible for periodic checks of humidity indicators and pressure gauges. Engines not packaged in metal, pressured containers must be stored in an unheated warehouse or better.

b. Shelf Life. Some resilient mounts have service/shelf lives. Check technical manuals for specifics.

5. Transportation. Aircraft engines may be shipped by any mode.

4-U. Engines, Diesel, Naval Shipboard.

1. Inspection. Include a check of humidity indicators on equipment packaged Method II.

2. Packaging.

   a. For Local Handling. Diesel engines which are turned in unpackaged must be anchored to a pallet or skids for handling and storage.

   b. Special Markings. New or refurbished diesel engines require these special container markings. Include them on used diesel engine containers as applicable.

      (1) Desiccant Materials. Affix the following marking adjacent to specific method markings: "CAUTION - REMOVE PACKAGING TAPE, DESICCANT, AND HUMIDITY INDICATOR FROM EQUIPMENT PRIOR TO OPERATION".

      (2) Unpacking Instructions. Stencil the words: "CAUTION - THIS EQUIPMENT MAY BE SERIOUSLY DAMAGED UNLESS UNPACKING INSTRUCTIONS ARE FOLLOWED CAREFULLY. UNPACKING INSTRUCTIONS ARE LOCATED (included location)" adjacent to the identification markings.

      (3) Reusable Container. Stencil the words: "REUSABLE CONTAINER" on the container.

      (4) Technical Manuals. Mark the location of the technical data on the packing list and shipping container.

3. Handling. No unusual handling requirements are necessary for this equipment. Check weights carefully since they vary greatly.

4. Storage.

   a. Environment.

CONTROL HUMID W'HOUSE (1)	HEATED W'HOUSE (2)	UNHEATED W'HOUSE (3)	OPEN COVERED STORAGE	OPEN STORAGE

      (1) Store diesel engines which are not packaged Method II in a controlled humidity area if possible. This includes non-RFI engines.

4-U-4 a. (2) Diesel engines which are not packaged Method II (include non-RFI) need a heated warehouse as a minimum storage. If you cannot meet this minimum, store in unheated warehouse and inform the Inventory Manager. Do not, in any case, store this equipment outside.

b. Segregation and Shelf Life. No unusual requirements.

5. Transportation. No unusual requirements.

4-V. Engine, Gas Turbine.

1. Inspection. Include a check of humidity indicators on equipment packaged Method II. Check pressure gauge on pressurized equipment to ensure pressure is not less than approximately three pounds per square inch.

2. Packaging.

   a. For Local Handling. Gas turbine engines which are turned in unpackaged must be anchored to a pallet or skids for handling and storage.

   b. Minimum Packaging for Shipment. Noise-tested gas turbine engines should always be shipped in the mount protection devices in which they are shipped by the manufacturer. If these original devices are not available, the packer must devise a way to immobilize the resilient mounts in an unstrained position and protect them from damage.

   c. Pressurization. Containers which need repressurization should be charged with clean compressed air free of liquid water to a pressure of five pounds per square inch.

   d. Special Markings. These special markings apply to packaged gas turbine engines.

      (1) Identifications. Mark the container on the same side as the humidity indicator with the following information:
      Engine, Gas Turbine
      Model Number
      Engine Serial Number
      Contract or Order Number
      Name of Contractor (if different from manufacturer)
      Exhaust Cone (is, or is not) included

      (2) Desiccant Material. Affix the following markings adjacent to specified method markings: "CAUTION - REMOVE PACKAGING TAPE, DESICCANT, AND HUMIDITY INDICATOR FROM EQUIPMENT PRIOR TO OPERATION".

      (3) Unpacking Instructions. Stencil the words: "CAUTION- THIS EQUIPMENT MAY BE SERIOUSLY DAMAGED UNLESS UNPACKING INSTRUCTIONS ARE FOLLOWED CAREFULLY. UNPACKING INSTRUCTIONS ARE LOCATED (included location)" adjacent to the identification markings.

4-V-2 d. (4) Reusable Container. Stencil the words: "REUSABLE CONTAINER" on the container.

(5) Pressure-Charged Equipment. Mark the container to indicate the system is pressurized to five pounds per square inch with clean compressed air.

(6) Noise-Tested Equipment. Mark containers for noise-tested equipment "SENSITIVE. NOISE-TESTED UNIT. HANDLE WITH CARE." Stencil the words: "THIS END UP", together with an arrow indicating the top of the container on all sides of the container.

(7) Technical Manuals. Mark the location of the technical data on the packing list and shipping container.

(8) Metal Containers. When the aircraft engine is packed in a metal container, apply the following markings: "DO NOT BREAK THE SEALS ON THIS CONTAINER UNTIL READY FOR USE UNLESS INSPECTION OF THE INTERIOR HUMIDITY INDICATOR SHOWS RENEWAL OF DEHYRATING AGENT OR REPRESERVATION TO BE NECESSARY."

3. Handling. Special Handling Tools and Equipment. Most gas turbine engines are extremely large and heavy and can only be handled by cranes with heavy lift capabilities. Check lift capabilities before attempting to move these engines.

4. Storage.

a. Environment.

CONTROL HUMID W'HOUSE (1)	HEATED W'HOUSE (2)	UNHEATED W'HOUSE (3)	OPEN COVERED STORAGE	OPEN STORAGE

(1) Store gas turbine engines which are not packaged Method II in a controlled humidity area if possible. This includes non-RFI engines.

(2) Engines which are not packaged Method II (includes non-RFI) need a heated warehouse as a minimum storage. If you cannot meet this minimum, store in unheated warehouse and inform the Inventory Manager. Do not, in any case, store this equipment outside.

4-V-4 a. (3) Store engines which are correctly packaged in an unheated warehouse or better. Do not remove desiccant from Method II packages. Leave inspection ports accessible for periodic checks of humidity indicators and pressure gauges.

b. Shelf Life. Some resilient mounts have service/shelf lives. Check technical manuals for specifics.

5. Transportation. Gas turbine engines may be shipped by any mode but the size and weight of some engines may severely limit the vehicles which can carry them. Special permits may be required by local authorities or arrangements made to get special right-of-way clearance.

4-W. Gas Generating And Handling Equipment.

1. Inspection. Include a check of humidity indicators on equipment packaged Method II. Check pressure gage on nitrogen-charged equipment to ensure pressure is not less than approximately ten pounds per square inch.

2. Packaging.

   a. For Local Handling. Gas generating and handling equipment which is turned in unpackaged must be anchored to a pallet or skids (or cushioned in an open container for smaller components) for handling and storage.

   b. Repressurization. Nitrogen-charged systems which need repressurization should be charged with dry, oil-free nitrogen to a pressure of ten to fifteen pounds per square inch (at approximately 70(o) F).

   c. Special Markings. Special markings to be used on containers of gas generating and handling equipment (as applicable) are:

      (1) Desiccant Materiels. Affix the following marking adjacent to specified method markings: "CAUTION - REMOVE PACKAGING TAPE, DESICCANT, AND HUMIDITY INDICATOR FROM EQUIPMENT PRIOR TO OPERATION".

      (2) Unpacking Instructions. Stencil the words: "CAUTION - THIS EQUIPMENT MAY BE SERIOUSLY DAMAGED UNLESS UNPACKING INSTRUCTIONS ARE FOLLOWED CAREFULLY. UNPACKING INSTRUCTIONS ARE LOCATED (include location)" adjacent to the identification markings.

      (3) Reusable Container. Stencil the words "REUSABLE CONTAINER" on the container.

      (4) Nitrogen-Charged Equipment. Mark the container to indicate that the system is pressurized to ten to fifteen pounds per square inch with dry, oil-free nitrogen. Mark the inspection door, or an adjacent surface, with the words: "NITROGEN PRESSURE GAGE-INSPECTION DOOR".

      (5) Labels. Provide the interior package and exterior container or with a green colored label (color number 14167 or FEDSTD-595) marked with the following information: "WARNING - THIS (fill in item name) CLEANED FOR OXYGEN/NITROGEN (as applicable) USE. DO NOT OPEN UNTIL READY FOR USE." Markings shall be in black.

4-W-2 c. (6) Technical Manuals. Mark the location of the technical data on the packing list and shipping container.

3. Handling. No unusual handling requirements are necessary for this equipment. Check weights carefully since they vary greatly.

4. Storage.

a. Environment.

CONTROL HUMID W'HOUSE (1)	HEATED W'HOUSE (2)	UNHEATED W'HOUSE (3)	OPEN COVERED STORAGE	OPEN STORAGE

(1) Store equipment which should have Method II protection, but does not, in a controlled humidity area if possible, This includes non-RFI equipments.

(2) Units which call for Method II but are not packaged Method II (includes non-RFI) need a heated warehouse as a minimum, storage. If you cannot meet this minimum, store in unheated warehouse and inform the Inventory Manager. Do not, in any case, store this equipment outside.

(3) Store equipment which is correctly packaged in an unheated warehouse or better. Do not remove desiccant from Method II packages. Leave inspection ports accessible for periodic checks of humidity indicators and pressure gages.

b. Segregation and Shelf Life. No unusual requirements.

5. Transportation. No unusual requirements.

4-X. Gear Assembles.

1. Inspection. Include a check of humidity indicators on assemblies packaged Method II, if visible. Do not open sealed assemblies.

2. Packaging.

   a. For Local Handling. Some large propulsion gear assemblies have provisions for handling by the assembly base. All other unpackaged assemblies must be anchored to a pallet or skids for handling and storage.

   b. Minimum Packaging for Shipment. Some extremely large propulsion gear cannot be packaged, only protected.

   c. Special Markings. These special container markings apply to packaged gear assemblies.

      (1) Desiccant Materiels. Affix the following marking adjacent to specified method markings: "CAUTION - REMOVE PACKAGING TAPE, DESICCANT, AND HUMIDITY INDICATOR FROM EQUIPMENT PRIOR TO OPERATION".

      (2) Unpacking Instructions. Stencil the words: "CAUTION - THIS EQUIPMENT MAY BE SERIOUSLY DAMAGED UNLESS UNPACKING INSTRUCTIONS ARE FOLLOWED CAREFULLY. UNPACKING INSTRUCTIONS ARE LOCATED (include location)" adjacent to the identification markings.

      (3) Technical Manuals. Mark the location of the technical data on the packing list and shipping container.

3. Handling.

   a. Special Handling Tools and Equipment. Most propulsion gear assemblies are extremely large and heavy and can only be handled with special high-capacity cranes. Check lift capacities carefully before attempting to move these assemblies.

   b. Special Handling Procedures and Safety Precautions. Propulsion gear assemblies are very critical and expensive. Most are extremely large and heavy and the weight is often unbalanced. They must be handled by special fittings on the assembly base. All persons involved in handling must work together carefully to avoid assembly damage and personal injury.

4-X-4. Storage.

a. Environmental.

CONTROL HUMID W'HOUSE	HEATED W'HOUSE	UNHEATED W'HOUSE	OPEN COVERED STORAGE	OPEN STORAGE
See Remarks				

Remarks: Propulsion gear assemblies are extremely critical and expensive. Give them the best available protection, even if non-RFI. Store inside if size permits. Contact the Inventory Control Point for specific requirements (such as portable dehumidifiers) for each particular case. Store other gear assemblies, like those for deck machinery, in the highest level of inside storage available, no matter how they are packaged.

b. Segregation and Shelf Life. No unusual requirements.

5. Transportation.

a. Mode. Gear assemblies may be shipped by any mode but the size and weight of some propulsion gear assemblies may severely limit the vehicles which can carry them. Special permits may be required by local authorities and/or arrangements made to get special right-of-way clearance.

b. Loading. Size of some propulsion gear assemblies may force shipment by open conveyance. After totally securing the assembly against shifting and movement, add barrier materiel, tarpaulins, etc., and totally secure for weather protections.

4-Y. Gear Box, Intermediate Helicopter.

1. Inspection. Include a check of humidity indicators on assemblies packaged Method II, if visible. Do not open sealed assemblies.

2. Packaging.

   a. For Local Handling. All unpackaged assemblies must be anchored to a pallet or skids for handling and storage.

   b. Minimum Packaging for Shipment. The packer must devise a way to immobilize the gear box in an unstrained position and protect it from damage.

   c. Special Markings. These special container markings apply to packaged gear assemblies.

      (1) Desiccant Materiel. Affix the following marking adjacent to specified method markings: "CAUTION - REMOVE PACKAGING TAPE, DESICCANT, AND HUMIDITY INDICATOR FROM EQUIPMENT PRIOR TO OPERATION."

      (2) Unpacking Instructions. Stencil the words: "CAUTION - THIS EQUIPMENT MAY BE SERIOUSLY DAMAGED UNLESS UNPACKING INSTRUCTIONS ARE FOLLOWED CAREFULLY. UNPACKING INSTRUCTIONS ARE LOCATED (include location)" adjacent to the identification markings.

      (3) Technical Manuals. Mark the location of the technical data on the packaging list and shipping container.

3. Handling. Gear box assemblies are very critical and expensive. All persons involved in handling must work together carefully to avoid assembly damage and personal injury.

4. Storage.

   a. Environment.

CONTROL HUMID W'HOUSE	HEATED W'HOUSE	UNHEATED W'HOUSE	OPEN COVERED STORAGE	OPEN STORAGE
	(2)	(1)		

4-Y-4. a. (1) Intermediate gear box assemblies are extremely critical and expensive. Give them the best available protection, even if non-RFI. Store in unheated warehouse or better.

b. Segregation and Shelf Life. No unusual requirements.

5. Transportation. Gear box assemblies may be shipped by an mode.

4-Z. Gear Box, Main (Helicopter).

1. Inspection. Include a check of humidity indicators on equipment packaged Method II. Check pressure gauge on pressurized equipment to ensure pressure is not less than approximately three pounds per square inch.

2. Packaging.

   a. For Local Handling. Main gear boxes which are turned in unpackaged must be anchored to a pallet or skids for handling and storage.

   b. Minimum Packaging for Shipment. Noise-tested gear boxes should always be shipped in the mount protection devices in which they are shipped by the manufacturer. If these original devices are not available, the packer must devise a way to immobilize the resilient mounts in an unstrained position and protect them from damage.

   c. Pressurization. Containers which need repressurization should be charged with clean compressed air free of liquid water to a pressure of five pounds per square inch.

   d. Special Markings. These special markings apply to packaged main gear boxes.

      (1) Identification. Mark the container on the same side as the humidity indicator with the following information:
      Main Gear Box (Helo)
      Model Number
      Gear Box Serial Number
      Contract or Order Number
      Name of Manufacturer
      Name of Contractor (if different from manufacturer)

      (2) Desiccant Materiel. Affix the following marking adjacent to specified method markings: "CAUTION - REMOVE PACKAGING TAPE, DESICCANT, AND HUMIDITY INDICATOR FROM EQUIPMENT PRIOR TO OPERATION."

      (3) Unpacking Instructions. Stencil the words: "CAUTION - THIS EQUIPMENT MAY BE SERIOUSLY DAMAGED UNLESS UNPACKING INSTRUCTIONS ARE FOLLOWED CAREFULLY. UNPACKING INSTRUCTIONS ARE LOCATED (include location)" adjacent to the identification markings.

   (4) Reusable Containers. Stencil the words: "REUSABLE CONTAINER" on the container.

4-Z-2 d. (5) Pressure-Charged Equipment. Mark the container to indicate the system is pressurized to five pounds per square inch with clean compressed air.

(6) Noise Tested Equipment. Mark containers for noise-tested equipment "SENSITIVE. NOISE-TESTED UNIT. HANDLE WITH CARE". Stencil the words: "THIS END UP", together with an arrow indicating the top of the container, on all sides of the container.

(7) Technical Manuals. Mark the location of the technical data on the packing list and shipping container.

(8) Metal Containers. When the main gear box is packed in a metal container, apply the following markings: "DO NOT BREAK SEALS ON THIS CONTAINER UNTIL READY FOR USE UNLESS INSPECTION OF THE INTERIOR HUMIDITY INDICATOR SHOWS RENEWAL OF DEHYDRATING AGENT OR REPRESERVATION TO BE NECESSARY."

3. Handling. Most main gear boxes are large and heavy and can only be handled by hoisting equipment. Check lift capabilities before attempting to lift these gear boxes.

4. Storage.

a. Environment.

CONTROL HUMID W'HOUSE	HEATED W'HOUSE	UNHEATED W'HOUSE	OPEN COVERED STORAGE	OPEN STORAGE
(1)	(2)	(3)		(3)

(1) Store main gear boxes which are not packaged Method II in a controlled humidity area if possible. This includes non-RFI engines.

(2) Gear boxes which are not packaged Method II (includes non-RFI) need a heated warehouse as a minimum storage. If you cannot meet this minimum, store in unheated warehouse and inform the Inventory Manager.

(3) Store gear boxes which are correctly packaged in open storage or better. Do not remove desiccant from Method II packages. Leave inspection ports accessible for periodic checks of humidity indicators and pressure gauges. Gear

4-Z-4 a. (3) boxes not packaged in mental pressurized containers must be stored in an unheated warehouse or better.

b. Shelf Life. Some resilient mounts have service/shelf lives. Check technical manuals for specifics.

5. Transportation. Main gear boxes may be shipped by any mode but the size and weight of some gear boxes may prohibit air shipment.

4-AA. Gear Box, Reduction (Fixed Wing).

1. Inspection. Include a check of humidity indicators on equipment packaged Method II. Check pressure gauge on pressurized equipment to ensure pressure is not less than approximately three pounds per square inch.

2. Packaging.

   a. For Local Handling. Reduction gear boxes which are turned in unpacked must be anchored to a pallet or skids for handling and storage.

   b. Minimum Packaging for Shipment. Noise-tested gear boxes should always be shipped in the mount protection devices in which they are shipped by the manufacturer. If these original devices are not available, the packer must devise a way to immobilize the resilient mounts in an unstrained position and protect them from damage.

   c. Pressurization. Container which need repressurization should be charged with clean compressed air free of liquid water to a pressure of five pounds per square inch.

   d. Special Markings. These special markings apply to packaged reduction gear boxes:

      (1) Identification. Mark the container on the same side as the humidity indicator with the following information:
      Reduction Gear Box, (Fixed Wing)
      Model Number
      Gear Box Serial Number
      Contract or Order Number
      Name of Manufacturer
      Name of Contractor (if different from manufacturer)

      (2) Desiccant Materiel. Affix the following markings adjacent to specified method markings: "CAUTION - REMOVE TAPE, DESICCANT, AND HUMIDITY INDICATOR FROM EQUIPMENT PRIOR TO OPERATION."

      (3) Unpacking Instructions. Stencil the words: "CAUTION - THIS EQUIPMENT MAY BE SERIOUSLY DAMAGED UNLESS UNPACKING INSTRUCTIONS ARE FOLLOWED CAREFULLY. UNPACKING INSTRUCTIONS ARE LOCATED (include location)" adjacent to the identification markings.

      (4) Reusable Containers. Stencil the words: "REUSABLE CONTAINER" on the container.

4-AA-2. d. (5) Pressure-Charged Equipment. Mark the container to indicate the system is pressurized to five pounds per square inch with clean compressed air.

(6) Noise-Tested Equipment. Mark containers for noise-tested equipment "SENSITIVE. NOISE-TESTED UNIT. HANDLE WITH CARE." Stencil the words: "THIS END UP", together with an arrow indicating the top of the container, on all sides of the container.

(7) Technical Manuals. Mark the location of the technical data on the packing list and shipping container.

(8) Metal Containers. When the reduction gear box is packed in a metal container, apply the following markings: "DO NOT BREAK THE SEALS ON THIS CONTAINER UNTIL READY FOR USE UNLESS INSPECTION OF THE INTERIOR HUMIDITY INDICATOR SHOWS RENEWAL OF DEHYDRATING AGENT OR REPRESERVATION TO BE NECESSARY."

3. Handling. Most reduction gear boxes are large and heavy and can only be handled by hoisting equipment. Check lift capabilities before attempting to move these gear boxes.

4. Storage.

a. Environment.

CONTROL HUMID W'HOUSE	HEATED W'HOUSE	UNHEATED W'HOUSE	OPEN COVERED STORAGE	OPEN STORAGE
(1)	(2)	(3)		(3)

(1) Store reduction gear boxes which are not packaged Method II in a controlled humidity area is possible. This includes non-RFI gear boxes.

(2) Gear boxes which are not packaged Method II (includes non-RFI) need a heated warehouse as a minimum storage. If you cannot meet this requirement, store in unheated warehouse and inform the Inventory Manager. Do not, in any case, store this equipment outside.

4-AA-4. a. (3) Store gear boxes which are correctly packaged in open storage or better. Do not remove desiccant from Method II packages. Leave inspection ports accessible for periodic checks of humidity indicators and pressure gauges. Gear boxes not packaged in metal, pressurized containers must be stored in an unheated warehouse or better.

b. Shelf Life. Some resilient mount have service/shelf lives. Check technical manuals for specifics.

5. Transportation. Reduction gear boxes may be shipped by any mode but the size and weight of some gear may severely limit the vehicles which can carry them. Special permits may be required by local authorities arrangements made to get special right-of-way clearance.

4-AB. Gear Box, Tail (Helicopter).

1. Inspection. Include a check of humidity indicators on assemblies package Method II, if visible. Do not open sealed assemblies.

2. Packaging.

   a. For Local Handling. All unpackaged assemblies must be anchored to a pallet or skids for handling and storage.

   b. Minimum Packaging for Shipment. The packer must devise a way to immobilize the gear bos in an unstrained position and protect it from damage.

   c. Special Markings. These special container markings apply to packaged gear assemblies.

      (1) Desiccant Material. Affix the following markings adjustment to specific method markings: "CAUTION - REMOVE PACKAGING TAPE, DESICCANT, AND HUMIDITY INDICATOR FROM EQUIPMENT PRIOR TO OPERATION."

      (2) Unpacking Instructions. Stencil the words: "CAUTION - THIS EQUIPMENT MAY BE SERIOUSLY DAMAGED UNLESS UNPACKING INSTRUCTIONS ARE FOLLOWED CAREFULLY. UNPACKING INSTRUCTIONS ARE LOCATED (include location)" adjacent to the identification markings.

3. Handling. Tail gear box assemblies are very critical and expensive. All persons involved in handling must work together to avoid assembly and personal injury.

4. Storage.

   a. Environment.

CONTROL HUMID W'HOUSE	HEATED W'HOUSE (2)	UNHEATED W'HOUSE (1)	OPEN COVERED STORAGE	OPEN STORAGE

      (1) Tail gear box assemblies are extremely critical and expensive. Give them the best available protection, even if non-RFI. Store unheated warehouse or better.

4-AB-4. b. Segregation and Shelf Life. No unusual requirements.

5. Transportation. Gear box assemblies may be shipped by any mode.

4-AC. Gears, Steering, Electro Hydraulic, Marine.

1. Inspection. Include a check of humidity indicators on equipment packaged Method II.

2. Packaging.

   a. For Local Handling. Steering gears which are turned in unpackaged must be anchored to a pallet or skids for handling and storage.

   b. Special Marking. These special container markings apply to packaged steering gears.

      (1) Desiccant Material. Affix the following markings adjacent to specified method markings: "CAUTION - REMOVE PACKAGING TAPE, DESICCANT, AND HUMIDITY INDICATOR FROM EQUIPMENT PRIOR TO OPERATION".

      (2) Unpacking Instructions. Stencil the words: "CAUTION - THIS EQUIPMENT MAY BE SERIOUSLY DAMAGED UNLESS UNPACKING INSTRUCTIONS ARE FOLLOWED CAREFULLY. UNPACKING INSTRUCTIONS ARE LOCATED (include location)" adjacent to the identification markings.

      (3) Technical Manuals. Mark the location of the technical data on the packing list and shipping container.

3. Handling.

   a. Special Handling Tools and Equipment. Most steering gears are extremely large and heavy and some can only be handled with special high-capacity cranes. Check lift capacities carefully before attempting to move these equipments.

   b. Special Handling Procedures and Safety Precautions. Steering gears are very critical and expensive. Most are extremely large and heavy and the weight is often unbalanced. All persons involved in handling must work together carefully to avoid assembly damage and personal injury.

4. Storage.

   a. Environment.

CONTROL HUMID W'HOUSE	HEATED W'HOUSE	UNHEATED W'HOUSE	OPEN COVERED STORAGE	OPEN STORAGE
X				

4-AC-4. a. Store steering gears in a controlled humidity area if possible. If you cannot meet this minimum, store in heated warehouse and inform the Inventory Manager. Do not, in any case, store this equipment outside. If equipment is to be in storage for more than 30 days, check oil level periodically. Method II packaged items are not to be opened when placed in controlled humidity storage. Do not remove desiccant. Leave inspection ports accessible for periodic of humidity indicators.

b. Segregation and Shelf Life. No unusual requirements.

5. Transportation.

a. Mode. Gear assemblies may be shipped by any mode but the size and weight of some steering gears may severely limited the vehicles which can carry them. Special permits may be required by local authorities and/or arrangements made to get special right-of-away clearance.

b. Loading. Size of some steering gears may force shipment by open conveyance. After totally securing the assembly against shifting and movement, add barrier material, tarpaulins, etc. and totally secure for weather protection.

4-AD. Gyrocompasses.

1. Inspection. Include a check of humidity indicators on equipment packaged Method II.

2. Packaging.

   a. For Local Handing. Small equipments turned in unpackaged must be cushioned in open containers for handling and storage. Anchor larger items to a pallet or skids.

   b. Preservation. When accessible, immobilize and protect the gimbals in accordance with manufacturer's instructions and technical manual.

   c. Special Marking. Special markings to be used on containers of packaged gyrocompasses (as applicable) area:

      (1) Desiccant Materiels. Affix the following markings adjacent to specified method markings on all Method II containers: "CAUTION - REMOVE PACKAGING TAPE, DESICCANT, AND HUMIDITY INDICATOR FROM EQUIPMENT PRIOR TO OPERATION".

      (2) Unpacking Instructions. Stencil the words: "CAUTION - THIS EQUIPMENT MAY BE SERIOUSLY DAMAGED UNLESS UNPACKING INSTRUCTIONS ARE FOLLOWED CAREFULLY. UNPACKING INSTRUCTIONS ARE LOCATED (include location)" adjacent to the identification markings.

      (3) Reusable Container. Stencil the words: "REUSABLE CONTAINER" on the container.

      (4) Technical Manuals. Mark the location of the technical data on the packing list and shipping container.

3. Handling. No special requirements. Use extra care with fragile items.

4. Storage.

   a. Environment.

CONTROL HUMID W'HOUSE	HEATED W'HOUSE	UNHEATED W'HOUSE	OPEN COVERED STORAGE	OPEN STORAGE
(1)	(2)	(3)		

4-AD-4. a. (1) Store gyrocompasses which are not packaged Method II in a controlled humidity area is possible. This includes non-RFI gyrocompasses.

(2) Gyrocompasses which should be packaged Method II, but are not, (includes non-RFI) need a heated warehouse as a minimum storage. If you cannot meet this minimum, store in unheated warehouse and inform the Inventory Manager. Do not, in any case, store this equipment outside.

(3) Store gyrocompasses which are correctly preserved-packaged Method II in an unheated warehouse. Do not remove desiccant. Leave humidity indicators accessible for periodic checks.

b. Segregation and Shelf Life. No unusual requirements.

5. Transportation. No unusual requirements.

4-AE. Indicators And Indicating Equipment.

1. Inspection. Include a check of humidity indicators on indicators and indicating equipment packaged Method II.

2. Packaging.

   a. For Local Handling. Indicators and indicating equipments which are turned in unpackaged must be anchored to a pallet or skids for handling storage.

   b. Special Markings. These special markings apply to indicators and indicating equipment containers.

      (1) Desiccant Materiels. Affix the following marking adjacent to specified method markings: "CAUTION - REMOVE PACKAGING TAPE, DESICCANT, AND HUMIDITY INDICATOR FORM EQUIPMENT PRIOR TO OPERATION".

      (2) Unpacking Instructions. Stencil the words: "CAUTION - THIS EQUIPMENT MAY BE SERIOUSLY DAMAGED UNLESS UNPACKING INSTRUCTIONS ARE FOLLOWED CAREFULLY. UNPACKING INSTRUCTIONS ARE LOCATED (include location)" adjacent to the identification markings.

      (3) Technical Manuals. Mark the location of the technical data on the packing list and shipping container.

      (4) Fragile Equipment. Place the word: "FRAGILE" on the container by labeling, stenciling or stamping.

3. Handling. No special requirements. Use extra care with fragile items.

4. Storage.

   a. Environment.

CONTROL HUMID W'HOUSE (1)	HEATED W'HOUSE (2)&(3)	UNHEATED W'HOUSE (4)	OPEN COVERED STORAGE	OPEN STORAGE

      (1) Store indicators and indicating equipments which should have Method I or II protection, but do not, in a controlled humidity area, if possible. This includes non-RFI equipments.

4-AE-4. a. (2) Indicators and indicating equipments which are not packaged Method I or II. (includes non-RFI) need a heated warehouse as a minimum storage. If you cannot meet this minimum, store in unheated warehouse and inform the Inventory Manager. Do not, in any case, store this equipment outside.

(3) For indicators packaged Method I.

(4) Store indicators and indicating equipments which are packaged Method II in an unheated warehouse or better. Do not remove desiccant. Leave humidity indicators accessible for periodic checks.

b. Segregation and Shelf Life. No unusual requirements.

5. Transportation. No unusual requirements.

4-AF. Instruments, Electrical And Electronic Test.

1. Inspection. Include a check of humidity indicators on equipment package Method II.

2. Packaging.

   a. For Local Handling. Small instruments turned in unpackaged must be cushioned in open containers for handling and storage. Anchor larger items to a pallet or skids.

   b. Special Markings. Special markings to be used on containers of electrical and electronic test instruments (as applicable) are:

      (1) Desiccant Materiels. For Method II packaged instruments affix the following marking adjacent to specified method markings: "CAUTION - REMOVE PACKAGING TAPE, DESICCANT, AND HUMIDITY INDICATOR FROM EQUIPMENT PRIOR TO OPERATION".

      (2) Fragile. Stencil the word: "FRAGILE" on the container.

      (3) Reusable Container. Stencil the words: "REUSABLE CONTAINER" on the container.

      (4) Technical Manuals. Mark the location of the technical data on the packing list and shipping container.

3. Handling. No unusual handling requirements are necessary for this equipment.

4. Storage.

   a. Environment

CONTROL HUMID. W'HOUSE (1)	HEATED W'HOUSE (2)&(3)	UNHEATED W'HOUSE (4)	OPEN COVERED STORAGE	OPEN STORAGE

      (1) Store instruments which should have Method I or II protection, but do not, in a controlled humidity area, if possible. This includes non-RFI equipments.

      (2) Instruments which are correctly preserved-packaged Method I or II.

4-AF-4. a. (3) ALL instruments which are not correctly preserved-packaged need a heated warehouse as a minimum storage. If you cannot meet this minimum, store in unheated warehouse and inform the Inventory Manager. Do not, in any case, store this equipment outside.

(4) Store instruments which are packaged Method II in an unheated warehouse or better. Do not remove desiccant. Leave inspection ports accessible for periodic checks of humidity indicators.

b. Segregation and Shelf Life. No unusual requirements.

4-AG. Laundry And Dry Cleaning Equipment.

1. Inspection. Include a check of humidity indicators on equipment packaged Method II.

2. Packaging.

   a. For Local Handling. Laundry and dry cleaning equipments which are turned in unpackaged must be anchored to a pallet or skids for handling and storage.

   b. Special Markings. Special markings to be used on containers of laundry and dry cleaning equipments (as applicable) are:

      (1) Desiccant Materiels. For Method II packaged equipment affix the following marking adjacent to specified method markings: "CAUTION - REMOVE PACKAGING TAPE, DESICCANT, AND HUMIDITY INDICATOR FROM EQUIPMENT PRIOR TO OPERATION".

      (2) Unpacking Instructions. Stencil the words: "CAUTION - THIS EQUIPMENT MAY BE SERIOUSLY DAMAGED UNLESS UNPACKING INSTRUCTIONS ARE FOLLOWED CAREFULLY. UNPACKING INSTRUCTIONS ARE LOCATED (including location)" adjacent to the identification markings.

      (3) Reusable Container. Stencil the words "REUSABLE CONTAINER" on the container.

      (4) Fragile. Place the word "FRAGILE" on the container by labelling, stenciling or stamping.

      (5) Arrows. Stencil the words "THIS SIDE UP" with arrows toward the top of the container.

      (6) Technical Manuals. Mark the location of the technical data on the packing list and shipping container.

3. Handling. No unusual handling requirements are necessary for this equipment.

4-AG-4. Storage.

a. Environment

CONTROL HUMID. W'HOUSE	HEATED W'HOUSE	UNHEATED W'HOUSE	OPEN COVERED STORAGE	OPEN STORAGE
(1)	(2)	(3)&(4)		

(1) Store laundry and dry cleaning equipments which should have Method II protection, but do not, in a controlled humidity area, if possible. This includes non-RFI equipments.

(2) All laundry and dry cleaning equipments which are not correctly preserved-packaged Method I or II need a heated warehouse as a minimum storage. If you cannot meet this minimum, store in an unheated warehouse and inform the Inventory Manager. Do not, in any case, store this equipment outside.

(3) Store laundry and dry cleaning equipment which are packaged Method I or II in an unheated warehouse or better. Do not remove desiccant. Leave inspection ports accessible for periodic checks of humidity indicators.

(4) Store laundry and dry cleaning equipments which require Method III protection, whether packaged correctly or not, in an unheated warehouse or better

b. Segregation and Shelf Life. No unusual requirements.

5. Transportation. No unusual requirements.

4-AH. Meters Detectors, And Monitors.

1. Inspection. Include a check of humidity indicators on equipment packaged Method II.

2. Packaging.

   a. For Local Handling. Small equipments turned in unpackaged must be cushioned in open containers for handling and storage. Anchor larger items to a pallet or skids.

   b. Special Markings. These special container markings apply to packaged meters, detectors, and monitors.

      (1) Desiccant Materiels. Affix the following marking adjacent to specified method markings: "CAUTION - REMOVE PACKAGING TAPE, DESICCANT, AND HUMIDITY INDICATOR FROM EQUIPMENT PRIOR TO OPERATION".

      (2) Technical Manuals. Mark the location of the technical data on the packing list and shipping container.

      (3) Fragile Equipment. Place the word: "FRAGILE" on the container by labeling, stenciling or stamping.

3. Handling. No special requirements. Use extra care with fragile items.

4. Storage.

   a. Environment

CONTROL HUMID. W'HOUSE	HEATED W'HOUSE	UNHEATED W'HOUSE	OPEN COVERED STORAGE	OPEN STORAGE
(1)	(2)	(3)&(4)		

      (1) Store units which are not packaged Method II in a controlled humidity area, if possible. This includes non-RFI units.

      (2) Units which are not packaged Method II (includes non-RFI) need a heated warehouse as a minimum storage. If you cannot meet this minimum, store in unheated warehouse and inform the Inventory Manager. Do not, in any case, store this equipment outside.

4-AH-4. a. (3) Store equipments which are correctly preserved-packaged Method II in an unheated warehouse. Do not remove desiccant. Leave humidity indicators accessible for periodic checks.

(4) Equipment normally packaged Method III, whether correctly packaged or not.

b. Segregation and Shelf Life. No unusual requirements.

5. Transportation. No unusual requirements.

4-AI. Propellers.

1. Inspection. Check propellers coating for bare spots, gouges, and peeling. Check blade edge protectors for dents, gouges, loose or broken straps or other damage such as chain and sling marks indicating possible concealed damage. Check whether the propeller or technical manuals are classified.

2. Packaging.

   a. For Local Handling. Small propellers turned in unpackaged must be cushioned in open containers for handling and storage. Propellers over 40 pounds must be provided with lifting eye bolts for handling. Classified equipment may require further covering or packaging depending on local storage conditions.

   b. Minimum Packaging for Handling.

      (1) Include special packing requirements when shipping classified materiel.

      (2) Apply blade edge protectors over the protective coating (ship propellers only).

      (3) Enclose the propeller certification form in a transparent, waterproof, greaseproof bag, prominently marked "CERTIFICATION FORM" and heat seal the bag. Attach the bag to the propeller hub or blade so that it is visible, readily available, and will remain with the propeller until propeller use.

   c. Special Markings. Use the following special markings on propeller containers as applicable.

      (1) Arrows. Stencil the words: "CAUTION - THIS SIDE UP (with arrows pointing up) STOW FLAT ON CONTAINER SKIDS."

      (2) Eye Bolts. Mark or tag each propeller with the following information: "HANDLE BY EYE BOLTS."

      (3) Blade Protectors. Mark each propeller with the following information: "DO NOT REMOVE BLADE EDGE PROTECTORS UNTIL PROPELLER INSTALLATION IS COMPLETED."

      (4) Container. Include the following: "IF CONTAINER IS DAMAGED NOTIFY COMMANDING OFFICER, U.S. COAST GUARD YARD, (SICP), CURTIS BAY, BALTIMORE, MD 21226. CONTAINER TO BE OPENED ONLY BY THE INSTALLATION ACTIVITY." FOR AIRCRAFT: Report container damage to: COMMANDING OFFICER, U.S. COAST GUARD REPAIR AND SUPPLY CENTER (AICP), ELIZABETH CITY, NC 27909.

4-AI-2. c. (5) Technical Data. Mark the location of the technical data on the packing list and shipping container.

(6) Classified Shipments. Do not affix packing lists to the outside of the container for classified materiel. Forward in accordance with Departmental Regulations.

3. Handling.

a. Special Handling Tools and Equipment. Some propellers are extremely large and heavy and can only be handled by cranes with heavy lift capabilities. Check weight capabilities before attempting to move the propeller.

b. Special Handling Procedures. Handle with extreme care. Propellers are easily damaged and inherently critical materiel; extensive expenditures of funds are required to repair even slight damage. Keep containers upright. The extremely heavy weight, large dimensions and critical nature of the propellers require the utmost attention to detail in equipment handling procedures. Handle large propellers by installed eye-bolts only.

3. Storage.

a. Environment.

CONTROL HUMID. W'HOUSE	HEATED W'HOUSE	UNHEATED W'HOUSE	OPEN COVERED STORAGE	OPEN STORAGE
			X*	

b. *Store propellers inside enclosures of adequate size and strength to preclude damage from materiel handling equipment. Place each propeller on wood skids of sufficient size to support the propeller above ground level. The enclosure must be constructed on a concrete slab with weight bearing capability for the weight of the propeller. The enclosure may be the nailed or demountable type. Enclosure sides and top are to provide weather protection as well as impact protection.
Additional weather protection is provided by covering the enclosure with flexible waterproof materiel.

c. Segregation. Store classified equipment in designated classified equipment storage area.

d. Shelf Life. No unusual requirements.

4-AI-4. Transportation. Ship classified materiels in accordance with Departmental Regulations. Propellers may be shipped by any mode but the extremely heavy weight and size of some propellers severly limit the vehicles which can transport them. Special permits may be required by local authorities and/or arrangement made to get special right-of-way clearance. Propellers exceeding 108 inches in diameter may not be shipped by air.

4-AJ. Pumps, General.

1. Inspection. Include a check of humidity indicators on equipment packaged Method II.

2. Packaging.

   a. For Local Handling. Pumps turned in unpackaged must be anchored to a pallet or skids (or cushioned in an open container for smaller components) for handling and storage.

   b. Minimum Packaging for Shipment. Noise-tested units should always be shipped in the mount protection devices in which they were shipped by the manufacturer. If these original devices are not available, the packer must devise a way to immobilize the resilient mounts in an unstrained position and to protect them from damage.

   c. Special Markings. These special container markings apply to packaged pumps.

      (1) Desiccant Materiels. For Method II packaged equipment affix the following marking adjacent to the specified method markings: "CAUTION - REMOVE PACKAGING TAPE, DESICCANT, AND HUMIDITY INDICATOR FROM EQUIPMENT PRIOR TO OPERATION"

      (2) Unpacking Instructions. Stencil the words: "CAUTION - THIS EQUIPMENT MAY BE SERIOUSLY DAMAGED UNLESS UNPACKING INSTRUCTIONS ARE FOLLOWED CAREFULLY. UNPACKING INSTRUCTIONS ARE LOCATED (include location)" adjacent to the identification markings.

      (3) Reusable Container. Stencil the words: "REUSABLE CONTAINER" on the container.

      (4) Noise-Tested Equipment. Mark containers for noise-tested units: "SENSITIVE. NOISE-TESTED UNIT. HANDLE WITH CARE." Stencil the words: "THIS END UP", together with an arrow indication the top of the container, on all sides of the container.

      (5) Technical Data. Mark the location of the technical data on the packing list and shipping container.

3. Handling. Some pumps are extremely large and heavy and can only be handled by equipment with heavy lift capabilities. Check lift capabilities before attempting to move the units.

4-AJ-3. b. Special Handling Procedures. Use extra care in handling noise-tested units. Most are extremely large and heavy. All persons involved in handling of equipment must work together carefully to avoid damage and personal injury.

4. Storage.

a. Environment.

CONTROL HUMID. W'HOUSE	HEATED W'HOUSE	UNHEATED W'HOUSE	OPEN COVERED STORAGE	OPEN STORAGE
(1)	(2)	(3)&(4)		

(1) Store equipment which should have Method I or II protection, but does not, in a controlled humidity area, if possible. This includes non-RFI equipments.

(2) Units which call for Method I or II but are not packaged Method I or II (includes non-RFI) need a heated warehouse as a minimum storage. If you cannot meet this minimum, store in unheated warehouse and inform the Inventory Manager. Do not, in any case, store this equipment outside.

(3) For pumps packaged Method I.

(4) Store equipment which is correctly packaged Method II in an unheated warehouse or better. Do not remove desiccant. Leave inspection ports accessible for periodic checks of humidity indicators.

b. Segregation. No unusual requirements.

c. Shelf Life. Some resilient mounts have service/shelf lives. Check technical manuals for specifics.

5. Transportation. No unusual requirements.

4-AK. Refrigerating And Air Conditioning Units.

1. Inspection. Include a check of humidity indicators on equipment packaged Method II. Check pressure gage on nitrogen-charged equipment to ensure pressure is not less than approximately five pounds per square inch.

2. Packaging.

   a. For Local Handling. Refrigerating and air conditioning units which are turned in unpackaged must be anchored to a pallet or skids for handling and storage.

   b. Minimum Packaging for Shipment. Noise-tested units should always be shipped in the mount protection devices in which they were shipped by the manufacturer. If these original devices are not available, the packer must devise a way to immobilize the resilient mounts in an unstrained position and to protect them from damage.

   c. Pressurization. Nitrogen-charged systems which need repressurization should be charged with dry, oil-free nitrogen to a pressure of five (5) pounds per square inch at approximately 70(o)F.

   d. Special Markings. Special markings to be used on containers of refrigerating and air conditioning units (as applicable) are:

      (1) Desiccant Materiels. Affix the following marking adjacent to specified method markings: "CAUTION - REMOVE PACKAGING TAPE, DESICCANT, AND HUMIDITY INDICATOR FROM EQUIPMENT PRIOR TO OPERATION".

      (2) Unpacking Instructions. Stencil the words: "CAUTION - THIS EQUIPMENT MAY BE SERIOUSLY DAMAGED UNLESS UNPACKING INSTRUCTIONS ARE FOLLOWED CAREFULLY. UNPACKING INSTRUCTIONS ARE LOCATED (include location)" adjacent to the identification markings.

      (3) Reusable Container. Stencil the words: "REUSABLE CONTAINER" on the container.

      (4) Nitrogen-Charged Equipment. Mark the container to indicate that the system is pressurized to 5 psig with dry, oil-free nitrogen. Mark the inspection door, or an adjacent surface, with the words, "NITROGEN PRESSURE GAGE-INSPECTION DOOR".

4-AK-2. d. (5) Noise-Tested Equipment. Mark containers for noise-tested units "SENSITIVE. NOISE-TESTED UNIT. HANDLE WITH CARE."

(6) Technical Manuals. Mark the location of the technical data on the packing list and shipping container.

3. Handling.

a. Special Handling Tools and Equipment. Most refrigerating and air conditioning units are extremely large and heavy and can only be handled by equipment with heavy lift capabilities. Check lift capabilities before attempting to move the units.

b. Special Handling Procedures. Use extra care in handling noise-tested units. Most are extremely large and heavy. All persons involved in handling of equipment must work together carefully to avoid damage and personal injury.

4. Storage.

a. Environment.

CONTROL HUMID. W'HOUSE (1)	HEATED W'HOUSE (2)	UNHEATED W'HOUSE (3)	OPEN COVERED STORAGE	OPEN STORAGE

(1) Store equipment which should have Method II protection, but does not, in a controlled humidity area, if possible. This includes non-RFI equipments.

(2) Units which call for Method II but are not packaged Method II (include non-RFI) need a heated warehouse as a minimum storage. If you cannot meet this minimum, store in unheated warehouse and inform the Inventory Manager. Do not, in any case, store this equipment outside.

(3) Store equipment which is correctly packaged in unheated warehouse or better. Do not remove desiccant from Method II packages. Leave inspection ports accessible for periodic checks of humidity indicators and pressure gages.

b. Segregation. No unusual requirements.

c. Shelf Life. Some resilient mounts have service/shelf lives. Check technical manuals for specifics.

5. Transportation. No unusual requirements.

4-AL. Refrigerators And Related Equipment.

1. Inspection. Include a check of humidity indicators on equipment packaged Method II.

2. Packaging.

   a. For Local Handling. Refrigerators and related equipments which are turned in unpackaged should have compressors secured and be anchored to a pallet or skids for handling and storage.

   b. Special Markings. Special markings are to be used on containers of refrigerators and related equipment (as applicable) are:

      (1) Desiccant Materiels. For Method II packaged equipment affix the following marking adjacent to specified method markings: "CAUTION - REMOVE PACKAGING TAPE, DESICCANT, AND HUMIDITY INDICATOR FROM EQUIPMENT PRIOR TO OPERATION".

      (2) Unpacking Instructions. Stencil the words: "CAUTION - THIS EQUIPMENT MAY BE SERIOUSLY DAMAGED UNLESS UNPACKING INSTRUCTION ARE FOLLOWED CAREFULLY. UNPACKING INSTRUCTIONS ARE LOCATED (include location)" adjacent to the identification markings.

      (3) Reusable Containers. Stencil the words: "REUSABLE CONTAINER" on the container.

      (4) Fragile. Mark shipping containers with arrows and the words: "UP" and "THIS SIDE UP".

      (5) Front. Mark the panel of the shipping container next to the front of the refrigerator being packed "FRONT" in letters not less than one inch in height.

      (6) Service Manuals. Mark the location of the service manuals on the packing list and shipping container.

3. Handling. No unusual handling requirements are necessary for this equipment.

4. Storage.

   a. Environment.

CONTROL HUMID. W'HOUSE	HEATED W'HOUSE	UNHEATED W'HOUSE	OPEN COVERED STORAGE	OPEN STORAGE
(1)	(2)&(3)	(4)		

4-AL-4. a. (1) Store refrigerators and related equipment which should have Method II protection, but do not, in a controlled humidity area, if possible. This includes non-RFI equipments.

(2) Refrigerators and related equipment which are correctly preserved-packaged Method I.

(3) All refrigerators and related equipments which are not correctly preserved-packaged need a heated warehouse as a minimum storage. If you cannot meet this minimum, store in unheated warehouse and inform the Inventory Manager. Do not, in any case, store this equipment outside.

(4) Store refrigerators and related equipments which are packaged Method II in an unheated warehouse or better. Do not remove desiccant. Leave inspection ports accessible for periodic checks of humidity indicators.

5. Segregation and Shelf Life. No unusual requirements.

6. Transportation. No unusual requirements.

4-AM. Rodmeters And Stadimeters.

1. Inspection. Include a check of humidity indicators on equipment packaged Method II.

2. Packaging. Rodmeters and stadimeters have specially designed containers. Even non-RFI equipments should be kept in these containers.

   a. Special Markings. Special markings to be used on containers of rodmeters and stadimeters (as applicable) are:

      (1) Desiccant Materiels. For Method II packaged stadimeters affix the following marking adjacent to specified method markings: "CAUTION - REMOVE PACKAGING TAPE, DESICCANT, AND HUMIDITY INDICATOR FROM EQUIPMENT PRIOR TO OPERATION".

      (2) Unpackaging Instructions. Stencil the words: "CAUTION - THIS EQUIPMENT MAY BE SERIOUSLY DAMAGED UNLESS UNPACKING INSTRUCTIONS ARE FOLLOWED CAREFULLY. UNPACKING INSTRUCTIONS ARE LOCATED (include location)" adjacent to the identification markings.

      (3) Reusable Container. Stencil the words: "REUSABLE CONTAINER" and "HANDLE WITH CARE" on the container.

      (4) Technical Manuals. Mark the location of the technical data on the packing list and shipping container.

3. Handling. No unusual handling requirements are necessary for this equipment. Use extra care with fragile items.

4. Storage.

   a. Environment.

CONTROL HUMID. W'HOUSE (1)	HEATED W'HOUSE (2)	UNHEATED W'HOUSE (2)	OPEN COVERED STORAGE	OPEN STORAGE

      (1) Store stadimeters which are not packaged Method IIB in a controlled humidity area, if possible. This includes non-RFI stadimeters.

      (2) Rodmeters and stadimeters which are not packaged correctly (includes non-RFI) need a heated warehouse as a minimum storage. If you cannot meet this minimum, store in unheated warehouse and inform the Inventory Manager. Do not, in any case, store this equipment outside.

4-AM-4. a. (3) Store rodmeters and stadimeters which are packaged Method IC or IIB in unheated warehouse or better. Do not remove desiccant. Leave humidity indicators accessible for periodic checks.

b. Segregation and Shelf Life. No unusual requirements.

5. Transportation. No unusual requirements.

4-AN. Rotor Blade, Main (Helicopter).

1. Inspection. No unusual requirements.

2. Packaging.

a. For Local Handling. Blades must be turned in, secured in special reusable containers designed by the manufacturer for handling and storage.

b. Pressurization. Special requirements may apply, see individual containers and appropriate technical manuals.

c. Special Markings. The following special markings apply:

(1) Identification. Mark the container on the same end as the record holder with the following information:

NSN
Part Number
Nomenclature
Serial Number
Contract or Order Number
Cube Weight

(2) Reusable Containers: Stencil the words: "REUSABLE CONTAINER" on the container. Stencil the words: "THIS END UP" together with an arrow indicating the top of the container on both sides of the container. Stencil the words: "DO NOT PUSH AGAINST SKIN WITH FORK LIFT PRONGS" on both sides of the container.

(3) Technical Manuals: Mark the location of the technical data on the packing list and shipping container.

3. Handling. No unusual handling requirements are necessary for this material.

4. Storage.

a. Environment.

CONTROL HUMID. W'HOUSE	HEATED W'HOUSE	UNHEATED W'HOUSE	OPEN COVERED STORAGE (1)	OPEN STORAGE

Remarks. Length may prohibit air shipment.

(1) Rotor Blades correctly packed may be stored in open storage or better. Storage requirements are the same whether blades are RFI or NON-RFI.

4-AO. Rotor Head.

1. Inspection. Include a checkof humidity indicators on equipment packaged Method II. Check pressure gauge on pressurized equipment to ensure pressure is not less than approximately three (3) pounds per square-inch.

2. Packaging.

   a. For Local Handling. Main rotor heads which are turned in unpackaged must be anchored to a pallet or skids for handling and storage.

   b. Minimum Packaging for Shipment. Noise-tested rotor heads should always be shipped in the mount protection devices in which they are shipped by the manufacturer. If these original devices are not available, the packer must devise a way to immobilize the resilient mounts in an unstrained position and protect them from damage.

   c. Pressurization. Containers which need repressurization should be charged with clean compressed air free of liquid water to a pressure of five (5) pounds per square inch.

   d. Special Markings. The following special markings apply to packaged main rotor heads:

      (1) Identification. Mark the container on the same side as the humidity indicator with the following information:

      Main Rotor Head (Helo)
      Model Number
      Rotor Head Serial Number
      Contract or Order Number
      Name of Manufacturer
      Name of Contractor (if different from manufacturer)

      (2) Desiccant Materiel. Affix the following markings adjacent to specified method markings: "CAUTION - REMOVE PACKAGING TAPE, DESICCANT, AND HUMIDITY INDICATOR FROM EQUIPMENT PRIOR TO OPERATION".

      (3) Unpacking Instructions. Stencil the words: "CAUTION - THIS EQUIPMENT MAY BE SERIOUSLY DAMAGED UNLESS UNPACKING INSTRUCTION ARE FOLLOWED CAREFULLY. UNPACKING INSTRUCTIONS ARE LOCATED (include location)" adjacent to the identification markings.

      (4) Reusable Container. Stencil the words: "REUSABLE CONTAINER" on the container.

4-AO-2. d. (5) Pressure-Charged Equipment. Mark the container to indicate the system is pressurized to five (5) pounds per square inch with clean compressed air.

(6) Noise-Tested Equipment. Mark containers for noise-tested equipment: "SENSITIVE. NOISE-TESTED UNIT. HANDLE WITH CARE." Stencil the words: "THIS END UP" together with an arrow indicating the top of the container on all sides of the container.

(7) Technical Manuals. Mark the location of the technical data on the packing list and shipping container.

(8) Metal Containers. When the main rotor head is packed in a metal container, apply the following markings: "DO NOT BREAK THE SEALS ON THIS CONTAINER UNTIL READY FOR USE UNLESS INSPECTION OF THE INTERIOR HUMIDITY INDICATOR SHOWS RENEWAL OF DEHYDRATING AGENT OR REPRESERVATION TO BE NECESSARY."

3. Handling. Most main rotor heads are large and heavy and can only be handled by hoisting equipment. Check lift capabilities before attempting to move these.

4. Storage.

a. Environment.

CONTROL HUMID. W'HOUSE	HEATED W'HOUSE	UNHEATED W'HOUSE	OPEN COVERED STORAGE	OPEN STORAGE
(1)	(2)			(3)

(1) Store main rotor heads which are not packaged Method II in a controlled humidity area if possible. This includes non-RFI rotor heads.

(2) Rotor heads which are not packaged Method II (includes non-RFI) need a heated warehouse as a minimum storage. If you cannot meet this minimum, store in unheated warehouse and inform the Inventory Manager. Do not, in any case, store this equipment outside.

4-AO-4.a. (3) Store rotor heads which are correctly packaged in open storage or better. Do not remove desiccant from Method II packages. Leave inspection ports accessible for periodic checks of humidity indicators and pressure gages.

b. Shelf Life. Some resilient mounts have service/shelf lives. Check technical manuals for specifics.

5. Transportation. Main rotor heads may be shipped by any mode.

4-AP. Servo-Components, Precision Instrument, Rotating.

1. Inspection. No unusual requirements.

2. Packaging.

   a. For Local Handling. Small equipments turned in unpackaged must be cushioned in open containers for handling and storage.

   b. Special Markings. Special markings to be used on container of servo-components (as applicable) are:

      (1) Unpacking Instructions. Stencil the words: "CAUTION - THIS EQUIPMENT MAY BE SERIOUSLY DAMAGED UNLESS UNPACKING INSTRUCTIONS ARE FOLLOWED CAREFULLY. UNPACKING INSTRUCTIONS ARE LOCATED (include location)" adjacent to the identification markings.

      (2) Technical Manuals. Mark the location of the technical data on the packing list and shipping container.

3. Handling. No unusual requirement are necessary for this equipment.

4. Storage.

   a. Environment

CONTROL HUMID. W'HOUSE	HEATED W'HOUSE (1)	UNHEATED W'HOUSE (2)	OPEN COVERED STORAGE	OPEN STORAGE

      (1) All servo-component equipments which are not correctly preserved-packaged need a heated warehouse as a minimum storage. If you cannot meet this minimum, store in unheated warehouse and inform the Inventory Manager. Do not, in any case, store this equipment outside.

      (2) All servo-component equipments which are correctly preserved-packaged Method I-A8.

   b. Segregation and Shelf Life. No unusual requirements.

5. Transportation. No unusual requirements.

4-AQ. Shafting, Ship Propulsion.

1. Inspection. No unusual requirements.

2. Packaging.

   a. Minimum Packaging for Handling and Storage. Clean all exposed shaft and bearing surfaces and coat with corrosion preventive compound (Grade 1 or Grade 5 of MIL-C-16173). Wrap and bag plastic or rubber coated shaft areas. Cradle, mount, and secure shafts on a skid base to prevent shaft deflection, shifting and damage.

   b. Special Markings. Special markings to be used on containers or shafts are:

      (1) Reusable Container. Stencil the words: "REUSABLE CONTAINER" on the container.

      (2) Container. Include the following: "IF CONTAINER IS DAMAGED, NOTIFY COMMANDING OFFICER, U.S. COAST GUARD YARD, (SICP), CURTIS BAY, BALTIMORE, MD 21226. CONTAINER TO BE OPEN ONLY BY THE INSTALLED ACTIVITY."

      (3) Technical Data. Mark the location of the technical data on the packing list and shipping container.

3. Handling.

   a. Special Handling Tools and Equipment. Some shafts are extremely large and heavy and can only be handled by cranes with heavy lift capabilities. Check weight capabilities before attempting to move the shaft.

   b. Special Handling Procedures. Handle with extreme care. Shafts are easily damaged and inherently critical materiel; extensive expenditures of funds are required to repair even slight damage. The extremely heavy weight, large dimension and critical nature of the shaft require the utmost attention to detail in equipment handling procedures.

4. Storage.

   a. Environment

CONTROL HUMID. W'HOUSE	HEATED W'HOUSE	UNHEATED W'HOUSE	OPEN COVERED STORAGE	OPEN STORAGE
		X*		

4-AQ-4. a. (cont'd)..*Cradles are located at 1/4 points of shaft. For shafts over 15 feet long, cradles are spaced at a maximum of 4-feet. Alternative storage is open covered storage on a concrete slab. Enclosures must be of adequate size and strength to preclude damage from materiel handling equipment. The enclosure may be constructed of wood or metal and may be of the nailed or demountable type. Enclosure sides and top are to provide weather protection as well as impact protection. Weather protection may be provided by covering the enclosure with flexible waterproof materiel. Storage requirements are the same whether shafts are RFI or non-RFI.

b. Segregation and Shelf Life. No unusual requirements.

5. Transportation. Shafts may be shipped by any mode but the extremely heavy weight and size of some shafts severely limit the vehicles which can transport them. Special permits may be required by local authorities and/or arrangements made to get special right-of-way clearance.

4-AR. Ship Inertial Navigation System (Sins) and Compass Switching Equipment.

1. Inspection. Include a check of humidity indicators on equipment packaged Method II. Check whether the equipment contains magnetic materiels. Check whether the equipment or technical manuals are classified.

2. Packaging.

   a. For Local Handling. Small equipments turned in unpackaged must be cushioned in open containers for handling and storage. Anchor larger items to a pallet or skids. Classified equipment may require further covering or packaging depending on local storage conditions.

   b. Minimum Packaging for Shipment.

      (1) When equipment which contains magnetic materiel is to be air shipped, the shielding requirement of MIL-S-4473 must be observed.

      (2) Include special packing requirements when shipping classified materiel.

      (3) SINS gyroscopes require special containers designed to protect against deterioration which could result from improper temperature and humidity conditions. The containers are equipped with a power supply and oven to maintain proper temperature and humidity conditions. Manufacturer's and other shipping activities' special instructions for the care of gyroscopes are affixed to the container. In addition, permanent markings which cite the requirement for an electrical source to operate the container heater are affixed to the special container.

   c. Special Markings. These special container markings apply to packaged equipment.

      (1) Desiccant Materiels. Stencil these special container markings adjacent to specified method markings on all Method II containers except the special gyroscope container: "CAUTION - REMOVE PACKAGING TAPE, DESICCANT, AND HUMIDITY INDICATOR FROM EQUIPMENT PRIOR TO OPERATION".

      (2) Unpacking Instructions. Stencil the words: "CAUTION - THIS EQUIPMENT MAY BE SERIOUSLY DAMAGED UNLESS UNPACKING INSTRUCTIONS ARE FOLLOWED CAREFULLY. UNPACKING INSTRUCTIONS ARE LOCATED (include location)" adjacent to the identification markings.

4-AR-2. c. (3) Technical Manuals. Mark the location of the technical data on the packing list and shipping container.

(4) Classified Shipments. Do not affix packing lists to the outside of the container for classified materiel. Forward in accordance with Department Regulations.

(5) Magnetic Materiels. When magnetic materiel is packed, affix red labels with white letters "MAGNETIC MATERIEL" on two opposite sides of the container.

(6) Fragile Equipment. Place the word "FRAGILE" on the container by labeling, stenciling or stamping.

(7) Gyroscope Container. Ensure that all special markings and permanent instructions are clearly visible.

3. Handling. No special requirements. Use extra care with fragile items.

4. Storage.

a. Environment.

CONTROL HUMID. W'HOUSE	HEATED W'HOUSE	UNHEATED W'HOUSE	OPEN COVERED STORAGE	OPEN STORAGE
(1)	(2)&(3)	(4)		

(1) Store equipment for which Method IC or II protection is required, but not accomplished, in a controlled humidity area if possible. This includes non-RFI equipments.

(2) Equipments which are correctly preserved-packaged Method IC.

(3) Units which are not packaged Method IC or II (includes non-RFI) need a heated warehouse as a minimum storage. If you cannot meet this minimum, store in unheated warehouse and inform the Inventory Manager. Do not, in any case, store the equipment outside.

(4) Store units which are packaged Method II in an unheated warehouse or better. Do not remove desiccant. Leave humidity indicators accessible for periodic checks.

b. Segregation.

(1) Gyroscopes. SINS gyroscopes have electrically heated ovens and monitor alarm circuits (visual and audible).

4-AR.4. b. The alarm circuit is activiated when container temperature is not within the allowed tolerance. Check SINS gyroscope containers each day to ensure correct oven temperature as specified in the instruction accompanying the gyroscope.

(2) Classified Equipment. Store classified equipment in designated classified equipment storage area.

(3) Magnetic Materiel. Store classified materiel in designated magnetic materiel storage area.

c. Shelf Life. No unusual requirements.

5. Transportation. Ship classified materiels in accordance with Department Regulations. Shipment of magnetic materiels by air must conform to MIL-S-4473. Transport gyroscopes by air. Shipping documents must include instructions adequate for informing the air carrier and other in-transit personnel of the requirement for monitoring the container oven alarm.

4-AS. Sonar Transducers And Domes.

1. Inspection. Ensure that domes have not accumulated water during transit.

2. Packaging.

   a. For Local Handling. Sonar transducers and domes turned in unpackaged must be anchored to a pallet or skids (or cushioned in an open container for smaller components) for handling and storage.

   b. Special Markings. These special container markings apply to packaged equipment.

      (1) Unpacking Instructions. Stencil the words: "CAUTION - THIS EQUIPMENT MAY BE SERIOUSLY DAMAGED UNLESS UNPACKING INSTRUCTIONS ARE FOLLOWED CAREFULLY. UNPACKING INSTRUCTIONS ARE LOCATED (include location)" adjacent to the identification markings.

      (2) Technical Data. Mark the location of the technical data on the packing and shipping container.

      (3) Reusable Container. Stencil the words: "REUSABLE CONTAINER" on the container.

      (4) Fragile Equipment. Place the word "FRAGILE" on transducer containers by labeling, stenciling or stamping.

3. Handling.

   a. Special Handling Equipment. Some sonar domes are extremely large and heavy and can only be handled by cranes with heavy lift capabilities. Some steel shipping frames for sonar domes require special detachable wheels for handling. Check lift capabilities before attempting to move these domes.

   b. Special Handling Procedures. Most domes are extremely large and heavy. All persons involved in handling of equipment must work together to avoid damage and personal injury.

4. Storage.

   a. Environment

CONTROL HUMID. W'HOUSE	HEATED W'HOUSE	UNHEATED W'HOUSE	OPEN COVERED STORAGE	OPEN STORAGE
		(1)	(2)	

4-AS-4. a. (1) For transducers and rubber sonar domes. Do not store domes in areas of the warehouse where they are exposed to direct sunlight.

(2) For metal or fiberglass sonar domes. Covering must preclude the accumulation of water during storage.

b. Segregation. No unusual requirements.

c. Shelf Life. Shelf life for sonar transducers varies. Check the Inventory Manager for the shelf life of the specific transducer.

5. Transportation. Sonar transducers and domes may be shipped by any mode but the size and weight of some of the domes may severely limit the vehicles which can carry them. Special permits may be required by local authorities and/or arrangements made to get special right-of-way clearance.

4-AT. Steam Turbines.

1. Inspection. Include a check of humidity indicators on equipment packaged Method II.

2. Packaging.

   a. For Local Handling. Steam turbines which are turned in unpackaged must be anchored to a pallet or skids for handling and storage unless turbine base has fittings installed.

   b. Special Markings. Special markings to be used on containers of steam turbines (as applicable) are:

      (1) Desiccant Materiels. For Method II packaged equipment affix the following marking adjacent to specified method markings: "CAUTION - REMOVE PACKAGING TAPE, DESICCANT, AND HUMIDITY INDICATOR FROM EQUIPMENT PRIOR TO OPERATION".

      (2) Unpacking Instructions. Stencil the words: "CAUTION - THIS EQUIPMENT MAY BE SERIOUSLY DAMAGED UNLESS UNPACKING INSTRUCTIONS ARE FOLLOWED CAREFULLY. UNPACKING INSTRUCTIONS ARE LOCATED (including location)" adjacent to the identification markings.

      (3) Technical Manuals. Mark the location of the technical data on the packing list and shipping container.

3. Handling. Heavy capacity handling equipment is required for most steam turbines. Handle by use of fittings on the turbine base if installed.

4. Storage.

   a. Environment.

CONTROL HUMID. W'HOUSE	HEATED W'HOUSE	UNHEATED W'HOUSE	OPEN COVERED STORAGE	OPEN STORAGE
*See remarks				

   b. *Remarks. Give steam turbines the best available protection, even if non-RFI. If turbine size and weight prohibit the use of inside storage area, the cognizant Inventory Control Point (ICP) shall be advised. The equipment interior should be placed under desiccation by using the portable desiccation system. Cover the turbine with a reinforced, waterproof shroud or tarpaulin. Do not remove desiccant from turbine packaged Method II. Leave inspection ports accessible for periodic checks of humidity indicators.

4-AT-4. c. Segregation. No unusual requirements.

d. Shelf Life. Refer to current shelf life instructions.

5. Transportation.

a. Mode. Steam turbines may be shipped by any mode but the size and weight of some turbines may severely limit the vehicles which can carry them. Special permits may be required by local authorities and/or arrangements made to get special right-of-way clearance.

b. Loading. Size of some turbines may force shipment by open conveyance. After totally securing the turbine against shifting and movement, add barrier materiel, tarpaulins, etc., and totally secure for weather protection.

4-AU. Switchboards.

1. Inspection. Include a check of humidity indicators on equipment packaged Method II.

2. Packaging.

   a. For Local Handling. Switchboards which are turned in unpackaged must be anchored to a pallet or skids for handling and storage.

   b. Special Markings. Special markings to be used on containers of switchboards (as applicable) are:

      (1) Desiccant Materiels. For Method II switchboards affix the following marking adjacent to specified method markings: "CAUTION REMOVE PACKAGING TAPE, DESICCANT, AND HUMIDITY INDICATOR FROM EQUIPMENT PRIOR TO OPERATION".

      (2) Unpacking Instructions. Stencil the words, "CAUTION - THIS EQUIPMENT MAY BE SERIOUSLY DAMAGED UNLESS UNPACKING INSTRUCTIONS ARE FOLLOWED CAREFULLY. UNPACKING INSTRUCTIONS ARE LOCATED (include location)" adjacent to the identification markings.

      (3) Fragile. Stencil the word "FRAGILE" on the container.

      (4) Reusable Container. Stencil the words: REUSABLE CONTAINER" on the container.

      (5) Technical Manuals. Mark the location of the technical data on the packing list and shipping container.

3. Handling. No unusual handling requirements are necessary for this equipment.

4. Storage.

   a. Environment

CONTROL HUMID. W'HOUSE	HEATED W'HOUSE	UNHEATED W'HOUSE	OPEN COVERED STORAGE	OPEN STORAGE
(1)	(2)	(3)		

      (1) Store switchboards which are not packaged Method II in a controlled humidity area, if possible. This includes non-RFI switchboards.

4-AU-4. a. (2) Switchboards which are not packaged Method II (includes non-RFI) need a heated warehouse as a minimum storage. If you cannot meet this minimum, store in unheated warehouse and inform the Inventory Manager. Do not, in any case, store this equipment outside.

(3) Store switchboards which are packaged Method II in an unheated warehouse or better. Do not remove desiccant. Leave humidity indicators accessible for periodic checks.

b. Segregation and Shelf Life. No unusual requirements.

5. Transportation. No unusual requirements.

4-AV. Valves.

1. Inspection. Include a check humidity indicators on equipment packaged Method II.

2. Packaging.

   a. For Local Handling. Valves turned in unpackaged must be cushioned in open containers for handling and storage. Anchor larger valves to a pallet or skids.

   b. Special Markings. Special markings to be used on containers of valves (as applicable) are:

      (1) Desiccant Materiels: For Method II packaged valves affix the following marking adjacent to specified method markings: "CAUTION - REMOVE PACKAGING TAPE, DESICCANT, AND HUMIDITY INDICATOR FROM EQUIPMENT PRIOR TO OPERATION".

      (2) Technical Manuals. Mark the location of the technical data on the packing list and shipping container.

3. Handling. No unusual handling requirements are necessary for this equipment.

4. Storage.

   a. Environment.

CONTROL HUMID. W'HOUSE	HEATED W'HOUSE	UNHEATED W'HOUSE	OPEN COVERED STORAGE	OPEN STORAGE
(1)	(2)	(3)&(4)		

      (1) Store valves which should have Method II protection but do not, in a controlled humidity area, if possible. This includes non-RFI valves.

      (2) All valves which are not correctly preserved-packaged Method I or II need a heated warehouse as a minimum, store in unheated warehouse and inform the Inventory Manager. Do not, in any case, store this equipment outside.

      (3) Store valves which are packaged Method I or II in an unheated warehouse or better. Do not remove desiccant. Leave inspection ports accessible for periodic checks of humidity indicators.

      (4) All valves which require Method III protection, whether correctly preserved-packaged or not.

4-AV-4. b. Segregation. No unusual requirements.

c. Shelf Life. Refer to Inventory Manager for current shelf life instruction for valves containing materiel such as "O" rings which have a shelf life date.

5. Transportation. No unusual requirements.

4-AW. Winches and Heavy Electro-Hydraulic and Electro-Mechanical Equipment.

1. Inspection. Include a check of humidity indicators on equipment packaged Method II.

2. Packaging.

   a. For Local Handling. Equipment which is turned in unpackaged should be handled by fittings on the equipment base, if installed. Otherwise it must be anchored to a pallet or skids (or cushioned in an open container for smaller components) for handling storage.

   b. Special Markings. Special markings to be used on containers of winches, heavy electro-hydraulic and electro-mechanicl equipment (as applicable) are:

      (1) Desiccant Materiels. For method II packaged equipment, affix the following marking adjacent to specified method markings: "CAUTION - REMOVE PACKAGING TAPE, DESICCANT, AND HUMIDITY INDICATOR FROM EQUIPMENT PRIOR TO OPERATION".

      (2) Unpacking Instuctions. Stencil the words, "CAUTION - THIS EQUIPMENT MAY BE SERIOUSLY DAMAGED UNLESS UNPACKING INSTRUCTIONS ARE FOLLOWED CAREFULLY. UNPACKING INSTRUCTIONS ARE LOCATED (include location)" adjacent to the identification markings.

      (3) Technical Manuals. Mark the location of the technical data on the packing list shipping containers.

3. Handling.

   a. Special Handling Tools and Equipment. Most equipments are extremely large and heavy and can only be handled by equipment with heavy lift capabilities. Check lift capabilities before attempting to move equipment.

   b. Special Handling Procedures. Handle by installed fittings on base, if available. Most equipment is extremly large and heavy. All persons involved in handling of equipment must work together carefully to avoid damage and personal injury.

4. Storage.

   a. Environment.

CONTROL HUMID. W'HOUSE (1)	HEATED W'HOUSE (2)	UNHEATED W'HOUSE (3)&(4)	OPEN COVERED STORAGE	OPEN STORAGE

4-AW-4. a. (1) Store equipment which should have Method II protection, but does not, in a controlled humidity area, if possible. This includes non-RFI equipments.

(2) Equipments which call for Methods I and II but are not packaged Methods I or II (includes non-RFI) need a heated warehouse as a minimum storage. If you cannot meet this minimum, store in unheated warehouse and inform the Inventory Manager. Do not, in any case, store this equipment outside.

(3) Store Method I and II equipments which are correctly packaged in an unheated warehouse or better. Do not remove desiccant from Method II packages. Leave inspection ports accessible for periodic checks of humidity indicators.

(4) Equipment normally packaged Method III, whether correctly packaged or not.

b. Segregation and Shelf Life. No unusual requirements.

5. Transportation. No unusual requirements.

VISUAL INSPECTION CHECKLIST

1. The following is a basic checklist for warehouse use. Command and local standing operating procedures may require additional inspections and/or condition report.

   - Is there any visible damage to shipping container?
   - Classified shipment: Does the container show any signs of having been opened or tampered with?
   - Is the level of protection adequate for anticipated conditions?
   - Is the shipping container strong enough to withstand anticipated handling, storage and transportation actions?
   - Is the shipping container band, tape, or sealant adequate and intact?
   - Is the pressure correct on pressurized equipment/containers?
   - Is the item correctly marked and easily identified per MIL-STD-129?
   - Are special markings and special handling instructions correct and properly placed?
   - Have markings or labels been waterproofed?
   - Are packing list(s) and unpacking instructions attached?
   - Open shipping container: Is interior packaging intact and undamaged?
   - Open shipping container: Are anchoring, blocking, bracing, and cushioning adequate and intact?
   - Is a DD Forms 6 required?
   - Is item being placed in correct storage area?

PACKAGING IMPROVEMENT REPORT | **REPORT CONTROL SYMBOL**

1. RPT NO (1–3)
2. CONTRACT NO OR TCN (4–20)
3. NOMENCLATURE (21–33)
4. STOCK OR PART NUMBER — NSN — ADDITIONAL (33–49)
5. CONSIGNOR (Shipper) (50–60)
ADDRESS
7. DEFICIENCY COST (61–64)

Mgr	MU	CMD	DCAS	Sp Int	Date Rec	PDL	Rpt Actv	Def 1	Def 2	Def 3
65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80

8. OFFICE ADMINISTERING CONTRACT
9. GSL
10. NUMBER OF UNSATISFACTORY CONTAINERS _____ AND/OR ITEMS _____
ACTION TAKEN. ☐ REPACKAGED/REMARKED ☐ HOLDING FOR DISPOSITION INSTRUCTIONS
☐ REQUEST STATEMENT OF CORRECTIVE ACTION ☐ REPORTED FOR INFORMATION ONLY - NO REPLY REQUIRED
11. REMARKS (Describe Deficiencies)

COPIES FURNISHED
Copy 1 to
Copy 2 to
12. INSTALLATION AND ACTIVITY
13a NAME | 13b SIGNATURE | 13c PHONE NUMBER | 13d DATE

DD FORM 1 AUG 74 6 — PREVIOUS EDITION IS OBSOLETE (S/N0102-LF-000-0060) — **Copy 1 - DD FORM 6 CONTROL POINT**

INSTRUCTIONS

1. This form is to be prepared as authorized by AR 700-58, NAVSUP Instruction 4030.29, AFR 71-4, MCO P-4040.29 and DSAR 4145.8. It will be used by all Department of Defense (DOD) activities for reporting preservation, packaging, packing and related marking deficiencies.

2. Include photographs or sketches (mail under separate cover with copy of DD Form 6 to investigating activity and to control point) to show the deficiency, whenever possible, employing the use of a rule in the photograph to show relative sizes. Polariod photographs are authorized. Use 8x10-inch photographs when greater detail is essential.

3. This form when completed will not be furnished to either the commercial contractor or carrier.

TYPICAL DEFICIENCIES TO BE CONSIDERED IN PREPARING REPORT

A. PRESERVATION OF PACKAGING
Preservation inadequate/omitted
Container inadequate/omitted
Corrosion
Contamination
Blocking or cushioning inadequate/omitted
Nonspecification materiels used
Excessive preservation/packaging or waste space on contractor shipment

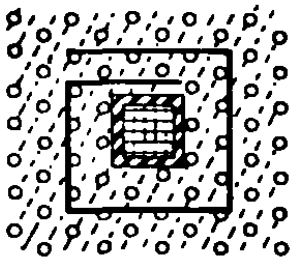
B. PACKING
Container overloaded
Container inadequate
Closure inadequate
Strapping inadequate/broken loose
Blocking or cushioning inadequate/omitted
Nonspecification materiels used
Excessive packing or waste space on contractor shipment
Unitization inadequate/omitted
Skids inadequate/omitted

C. MARKING
Identification markings omitted/incorrect/incomplete, including: FSN item description, quantity and unit of issue, contract or purchase number, level of protection and date, gross weight and cube, shelf-life, Method II label, serial number, etc.

INSTRUCTIONS

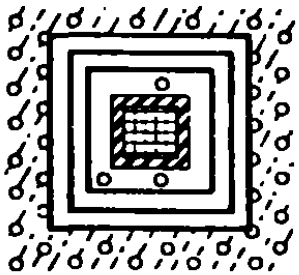
TABLE A-1. DEFINITION OF METHODS AND SUBMETHODS OF PRESERVATION-PACKAGING

METHOD I	METHOD IB	METHOD IC	METHOD II
reservative coating (with reaseproof wrap as required)	Strippable compound coating (hot or cold dip)	Waterproof enclosure (with preservative as required)	Water-vaporproof barrier with desiccant (with preservative when required)
METHOD IA			
Water-vaporproof enclosure (with reservative as required)			
Submethods	**Submethods**	**Submethods**	**Submethods**
IA-5 - Rigid metal container, sealed	IB-1 - Direct application of strippable compound	IC-1 - Greaseproof, waterproof bag, sealed	IIa - Floating bag
IA-6 - Rigid container (Items immersed in preservative, oil type) sealed	IB-2 - Aluminum foil wrap, strippable compound	IC-2 - Container, overwrapped with waterproof barrier materiel, sealed	IIb - Container, barrier, container
IA-8 - Water-vaporproof bag, sealed		IC-3 - Waterproof bag, sealed	IIc - Cushioned item, bag
IA-13 - Rigid container other than all-metal, sealed		IC-4 - Rigid container other than all-metal, sealed	IId - Rigid metal container sealed
IA-14 - Container, bag, container		IC-7 - Blister package - multiple compartment, individually sealed	IIe - Container, barrier
IA-15 - Container, bag		IC-8 - Skin package - vacuum formed	IIf - Rigid container other than all-metal, sealed
IA-16 - Floating barrier			METHOD III
			Packaged for mechanical and physical protection only



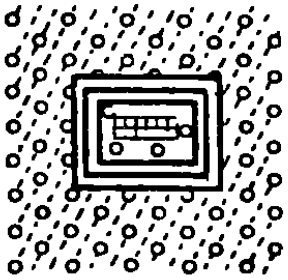
METHOD I

PRESERVATIVE COATING APPLIED WRAPPER NOT SEALED WATER AS LIQUID OR VAPOR AND CORROSIVE ATMOSPHERE HAS RELATIVELY FREE CONTACT WITH THE PRESERVED PART



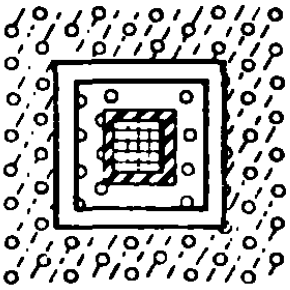
METHOD IA

PRESERVATIVE COATING APPLIED AS REQUIRED WATER VAPOR PROOF BARRIER SEALED ONLY TRACES OF WATER VAPOR PENETRATION TO PART POS SIBLE



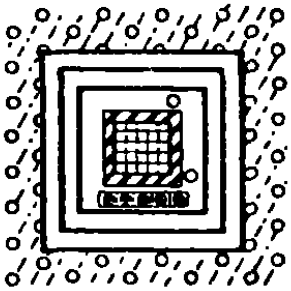
METHOD IB

PART, WRAPPED OR UNWRAPPED, ENCLOSED WITHIN COATING OF STRIPPABLE COMPOUND NO PENETRATION OF LIQUID AND ONLY TRACES OF WATER VAPOR TO PART



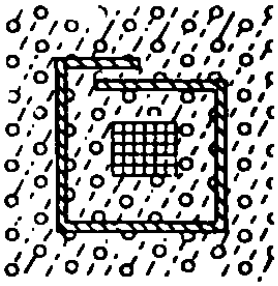
METHOD IC

PRESERVATIVE COATING APPLIED AS REQUIRED WATERPROOF OR WATER RESISTANT BARRIER SEALED ONLY WATER VAPOR PENETRATION TO PRESERVED PART



METHOD II

PRESERVATIVE COATING APPLIED AS REQUIRED WATERPROOF WATER VAPORPROOF BARRIER SEALED ONLY TRACES OF WATER VAPOR PENETRATION TO PART AND THIS IS ABSORBED BY DESICCANT.



METHOD III

NO ADDITIONAL PRESERVATIVE ON PART PACKAGED FOR PHYSICAL AND MECHANICAL PROTECTION ONLY RELATIVELY FREE ACCESS OF LIQUID OR WATER VAPOR TO PART.

	PART OR ASSEMBLY		WATERPROOF BARRIER, SEALED
	PRESERVATIVE		WATERPROOF, WATER VAPORPROOF BARRIER SEALED
	DESICCANT, ADSORBING MOISTURE		WATER VAPOR
	UNSEALED WRAPPER		RAIN, SALT SPRAY, ETC
	MECHANICAL OR PHYSICAL PROTECTION		STRIPPABLE COMPOUND

Characteristics of Basic Methods of Preservation—Packaging

CROSS-INDEX OF EQUIPMENTS

1. This index is an alphabetical listing of the equipments whose Inspection, Packaging, Handling, Storage, and Transportation (IPHST) requirements are covered by these guidelines. The designator in the right-hand column is the page number of the specific procedure in this guideline which covers the IPHST requirements for the specific equipment listed. Equipments are often listed under more than one nomenclature (alphabetically) to allow for differing container markings. The title of the procedure may not always seem descriptive of the specific equipment but the IPHST requirements are appropriate.

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