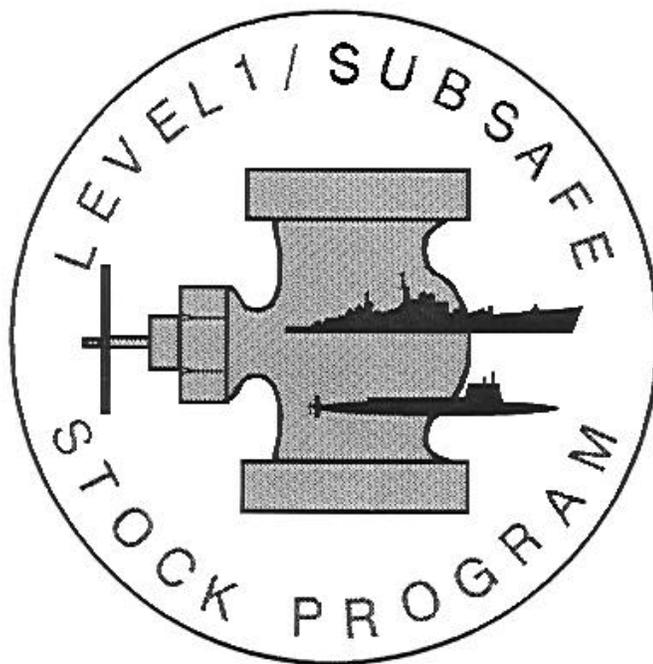


NAVICPINST 4030.10L

**PACKAGING, PACKING
AND MARKING OF
LEVEL I / SUBSAFE
(SUBMARINE SAFETY
CERTIFICATION)
PROGRAM ITEMS**



NAVICP INSTRUCTION 4030.10L

INTRODUCTION – 1 Nov 2001

Subj: **PRESERVATION, PACKAGING, PACKING AND MARKING OF LEVEL I / SUBSAFE (SUBMARINE SAFETY CERTIFICATION) PROGRAM ITEMS**

Ref: (a) NAVICPINST 4355.5
(b) SECNAVINST 4355.18
(c) NAVSUPINST 4030.54
(d) MIL-STD-2073

Encl: (1) Packaging Of Oxygen Service Items
(2) Special Packaging Instruction: SPI 03950-10011 (Valves)
(3) Special Packaging Instruction: SPI 03950-10012 (Submarine Periscope)
(4) Special Packaging Instruction: SPI 03950-10048 (Packaging of Ferrous/ Non-ferrous Bolts, Screws and Studs – Unit of Issue = Box)
(5) Special Packaging Instruction: SPI 03950-10052 (Cylinder/Flask, Compressed)
(6) Special Packaging Instruction: SPI 03950-10054 (Submarine Antenna Mast)
(7) Special Packaging Instruction: SPI 03950-10083 (Packaging, Packing and Marking of Ball and Seat Assemblies)
(8) Marking Requirements For LEVEL I / SUBSAFE Stock Program Material

1. **Purpose** - The purpose of this instruction is to provide preservation, packaging, packing and marking data for LEVEL I (LI) stock program material.

2. **Summary of Changes** - This instruction is being revised to provide updated information on preservation, packaging, packing and marking.

3. **Cancellation** - NAVICPINST 4030.10K

4. **Scope** - This instruction applies to all LEVEL I items assigned Special Material Identification Code (SMIC) “L1”, “S1” and “C1”.

5. **Background** - The Naval Inventory Control Point (NAVICP) is responsible for providing initial and replenishment material for LEVEL I components/systems and for the support of systems (including both submarines and surface ships) that require Level I certification. Due to the lack of shipboard storage space, and the requirements for positive identification, a standardized/simplified method of packaging is considered essential. This packaging instruction has been developed to require a minimum of storage space and to provide protection for the item. The packaging methods and containers are designed for reuse and item inspection.

6. General -

a. Enclosures (1) through (8) provide supplemental and detailed packaging, packing and marking requirements. These requirements will be used to determine the proper method of packaging, packing and marking for items being prepared for shipment and storage. Packaging requirements referenced herein are in accordance with MIL-STD-2073 (Department Of Defense, Standard Practice For Military Packaging).

b. Organizational units are responsible for obtaining specific packaging data for each item from the NAVICP Master Information File (MIF). Revisions to this instruction will be made when necessary to incorporate changes. Packaging requirements are available, upon request, from NAVICP, Pollution Prevention / PHS&T Division, Code M0772, DSN 430-1797, (717) 605-1797, Fax (717) 605-3480 / 430-3480.

c. The following definitions apply:

(1) Unit Package: The first wrap, bag or container applied to a single item or a group of items with a single stock number, preserved or unpreserved, which constitute a complete or identifiable package.

(2) Packing: Application or use of an exterior shipping container and the assembling of packaged or unpackaged items, together with the necessary blocking, bracing, cushioning and weather proofing, plus exterior strapping or reinforcement, as well as marking. External packing markings will include National Stock Number (NSN)/Navy Item Control Number (NICN), serial number, nomenclature, quantity, unit of issue and the Material Identification and Control (MIC) Number.

(3) Shipping Container: The external container used to ship material between activities and to protect the unit package from damage during storage and transportation.

7. Policy -

a. Program items will be preserved, packaged and packed in accordance with MIL-STD-2073 and/or the supplemental packaging requirements. Marking of program items will be in accordance with MIL-STD-129 (Marking For Shipment And Storage), applicable supplemental packaging requirements and Enclosure (8) of this instruction.

b. Shipping containers will be marked with **red** lettering indicating “**LEVEL I**” as applicable. Depending on the size of the package, letter size may range from ¾” minimum to 2” maximum. Packages will be marked “**LEVEL I**”, as applicable on two (2) sides and two ends of the container.

c. Specific procedures for the turn-in and marking of LEVEL I Material Turned Into Stores (MTIS) are contained in reference (a).

d. Receipts of LEVEL I material improperly packaged, packed and marked or damaged due to improper packaging, will be reported on Standard Form 364, Supply Discrepancy Report, as specified in reference (b). The Supply Discrepancy Report will be distributed, as required by reference (a), with a copy going to the NAVICP code M0772 point of contact.

e. This instruction does not apply to the following:

(1) Shipments to disposal will receive minimum packaging and will not be marked or identified as LEVEL I material.

(2) Material issued locally (requisitions, etc.): The unit / intermediate package will serve as the shipping container.

8. **Responsibilities** -

a. **Fleet Units** – are responsible for storing and shipping LEVEL I items in the basic unit package in which they are received. The unit package (container and cushioning) will be retained during shipboard storage. If the basic package is damaged or destroyed, a new package will be fabricated, if possible. The fleet will repackage items to ensure safe storage and delivery. Repackaged items will be marked in accordance with MIL-STD-129 and Enclosure (8) of this instruction.

b. **Shipyards and Supply Centers** – are responsible for packaging LEVEL I material for storage or shipment in accordance with the basic packaging methods and supplemental requirements specified in Enclosures (1) through (8), if applicable.

c. **LEVEL I Receipt Inspection Activities**

(1) Items destined for receipt inspection will be opened in a manner that will prevent damage to the packaging materials. Upon completion of inspection, the items will be repackaged using original packaging materials to restore the unit package.

(2) LEVEL I receipt inspection activities are cautioned to open containers with care to prevent damage to bar code labels. After material inspection, containers will be closed in a manner that will prevent the covering of the bar code labels. It is essential that all materials be repackaged in their original containers.

(3) NAVICP “spot buy” shipments received for inspection and further shipment to destinations for immediate use will be packaged and packed in accordance with the ASTM-D3951 (Standard Practice For Commercial Packaging).

(4) The following exceptions require packaging in accordance with MIL-STD-2073 and / or supplemental packaging requirements for immediate use shipments:

- (a) Special / critical items
- (b) Oxygen clean material
- (c) Repairables for which peculiar / dedicated reusable containers are specified.
- (d) Foreign Military Sales (FMS)
- (e) Material destined for ships at sea.

d. **Fleet Units, Shipyards, Supply Centers, Inspection Units** – will ensure compliance with applicable requirements specified in Reference (c). Will also ensure the reduction of plastic packaging materials for items onboard Navy ships.

e. **NAVICP – Mechanicsburg**

(1) Develop and maintain packaging data for all LEVEL I items.

(2) Revise, as required, packaging instructions for all LEVEL I items and applicable supplemental packaging and marking data.

f. **NAVICPINST 4030.10 User Activities** – are responsible for reporting all discrepancies and / or recommendations for changes to this instruction to:

Commander
Naval Inventory Control Point
Pollution Prevention/PHS&T Division
Code M0772, Attention: Bob Fleegal
P.O. Box 2020
5450 Carlisle Pike Mechanicsburg, Pa. 17055-0788

Telephone
DSN: 430-1797
Commercial (717) 605-1797

Fax: 430-3480
(717) 605-3480

E-Mail
Robert_E_Fleegal/MECH/NICP/NAVSUP@NAVSUP

9. **Distribution** – <http://www.navicp.navy.mil/84/845/stkpts.htm>

PACKAGING OF OXYGEN SERVICE ITEMS

1. Items will be cleaned and tested in accordance with instructions specified in MIL-STD-1330D, as modified by the NAVSEA report on Aqueous Oxygen Cleaning Products and Processes, dated 24 March 1994. The report, and any supplements, may be obtained from the Naval Sea Systems Command, NAVSEA 03Y2A, (703) 602-5552, extension 205.

2. Clean rooms and clean packaging materials will conform to the specifications in FED-STD-209 and MIL-HDBK-407 as follows:

a. Cleanliness of protective packaging materials such as wraps, sealing caps, plugs, tapes and barrier bags will be equal to the cleanliness requirements of the item being packed. The cleanliness level of the packaging materials must be maintained from the cleaning procedure until bag closure.

b. Packaging Of The Item

(1) Intimate Wraps and Cushioning - Use unmarked, non-tinted material as multiple wraps and pads to blunt sharp corners, edges and protrusions. Wraps and pads will be secured with clean, non-shedding non-adhesive tape. Tape conforming to ASTM-D5486 may be used, but must not contact the surface of the item.

(2) Caps/Plugs - All protective caps will be fabricated from corrosion resistant metal. If metal caps are not practical, coverings may be made with barrier material conforming to L-P-378, Type I or II, Grade A, Class 1 and secured with tape conforming to ASTM-D5486. Plugs will be mechanically expandable, insert type, fabricated from non-shedding rubber. Components which have been cleaned and tested will be dried thoroughly prior to installation of plugs and caps.

(3) Inner barrier bags will be fabricated from unmarked, colorless barrier material conforming to A-A-3174, Type I or II, Grade A, Class 1, with a minimum thickness of 4 mils. A thickness of 6 mils will be used for items which have sharp edges or weigh over 5 pounds. Bags will be heat sealed and may not be reused. If the inner bag is opened, the item must be re-cleaned if not used immediately. All plastics must be recycled or disposed of by an approved method.

(4) Outer bags will be fabricated from unmarked, colorless barrier material conforming to MIL-PRF-22191, Type I, with a minimum thickness of 4 mils. MIL-PRF-131 water vapor-proof bags may be used for large items if written approval is given by the NAVICP-M PHS&T Division, Code M0772. The bag will be large enough to permit resealing if the inner bag is removed and reinserted.

c. Labeling - A warning label will be placed on the outside of the outer barrier bag, fabricated from **green** paper, which will be a similar shade to FED-STD-595 (latest revision), Color 14187. Lettering will be easily read with black being the preferred color. Labels are not permitted on the inner barrier bag. The label will include the following:

**WARNING - THIS PART IS CERTIFIED CLEAN FOR OXYGEN SERVICE
PER MIL-STD-1330D AND MODIFICATIONS -
DO NOT OPEN UNTIL READY FOR USE**

3. Unit / Intermediate Container - The use of a "soft" unit container (i.e., barrier bag) requires a "hard" intermediate container (i.e., fiberboard box). All double-bagged items will be placed within a "hard" unit or intermediate container. If the unit container is a box, sufficient cushioning material must be used inside the box to prevent movement of the bagged item and to protect the item and the bag. If the unit container is a bag, non-dusting cushioning material of sufficient thickness to protect the bags will be placed between the bag or bags and the interior surface of the carton or box. The use of loose-fill polystyrene (peanuts or other shapes), excelsior, newspaper or shredded paper as cushioning or filler is prohibited.

4. Marking - Each unit, intermediate and shipping container will be marked in accordance with MIL-STD-129. Unit or intermediate boxes will be stamped or marked in **green** lettering:

"SPECIAL CLEAN O2-N2"

(minimum ½" in height, maximum 2" in height). If box size does not permit ½" lettering, proportional sized lettering is acceptable.

5. Packing for shipment will be in accordance with the requirements of MIL-STD-2073, Level A for overseas shipments, Level B for domestic shipments, unless otherwise specified. Applicable shipping containers will be selected from Appendix C, Table C.II. of MIL-STD-2073.

6. Alternate Method - Upon written approval from the NAVICP-M PHS&T Division, Code M0772, items of excessive size, weight and/or irregular configuration and having only internal surfaces and passages in direct contact with oxygen (i.e., items are not immersed in an oxygen atmosphere/environment when in operation) will be cleaned and packaged as follows:

a. All internal passages and surfaces which contact/contain oxygen will be cleaned for oxygen service in accordance with the Navy Aqueous Oxygen Cleaning Process, and capped in accordance with paragraph 2.b.(2) of this instruction.

b. Exterior surfaces of the item, which are not exposed to oxygen, will be cleaned in accordance with Appendix J, Table J.II. of MIL-STD-2073.

c. Packaging methods and materials, specified by the MIL-STD-2073 packaging code in the contract or order, will be used to provide the required protection to the item.

d. A **green** warning label (in accordance with paragraph 2.c. of this instruction) will be affixed to the unit container and contain the following statement:

**WARNING - INTERIOR COMPONENTS, PASSAGES AND CRITICAL
SURFACES HAVE BEEN CLEANED FOR OXYGEN SERVICE
PER MIL-STD-1330D AND MODIFICATIONS
DO NOT REMOVE CAPS OR PLUGS UNTIL INSTALLATION/USE**

7. The cleaning compound specified in MIL-STD-1330D, the Navy Oxygen Cleaner (NOC), is available from: Octagon Process Inc., 596 River Road, Edgewater, New Jersey, 07020. The cleaner is manufactured under the title of "OCC-RTU (Oxygen Cleaning Compound - ready to use)", in the following quantities:

National Stock Number

6850-01-389-3880 - 55 Gallon Drum

6850-01-389-3859 - 5 Gallon Drum

NAVAL INVENTORY CONTROL POINT		CODE IDENTITY	SPI NUMBER
SPECIAL PACKAGING INSTRUCTION (SPI)		03950	10011
NOMENCLATURE:	NATIONAL STOCK NUMBER	DATE	REV
VALVES	VARIOUS	19 June 01	J
QUP	MAXIMUM UNIT PACKAGED WEIGHT	MAXIMUM UNIT PACKAGED CUBE	MAXIMUM UNIT PACKAGED DIMENSIONS
001	AS SPECIFIED	AS SPECIFIED	AS SPECIFIED
		DRAWN BY: RF	APPVD BY: FHS
		SHEET 1 OF 1	

1. Preservation - Packaging Requirements:

Valves with a net weight of up to 40 pounds shall be preserved and packaged in accordance with the MIL-STD-2073 Packaging Requirements Data in the order and requirements herein. Valves cleaned, preserved and wrapped as specified in the packaging code shall be cushioned with ASTM-D4727 fiberboard, used as pads, cells, sleeves or die cuts, or any other comparable cushioning material (excluding loose fill), in a thickness required to protect the valve and the unit container. Standard practice for closure methods for fiberboard shipping containers shall be in accordance with ASTM-D1974.

Cushioning shall be designed to immobilize the item and fully support all inner panels of the unit container to support superimposed loads/stacking within the shipping container and while in storage.

2. Packing Requirements:

When the weight of the valves preserved and packaged in accordance with paragraph 1 above exceeds 90 pounds, unit containers shall be packed for shipment in wood shipping boxes conforming to the requirements of PPP-B-601 or PPP-B-621, type or class overseas for CONUS and XCONUS shipments. Boxes shall be provided with nominal 2 by 4 inch skids. The maximum gross weight of each container shall be 200 pounds. When the weight of the valves preserved and packaged in accordance with paragraph 1 above is less than 90 pounds, unit containers shall be packed in shipping containers conforming to MIL-STD-2073 requirements, Level A packing for XCONUS shipments, ASTM-D3951 for CONUS shipments.

3. Marking Requirements:

Unit and shipping containers shall be marked in accordance with the requirements of MIL-STD-129 and as specified in the order.

NAVAL INVENTORY CONTROL POINT		CODE IDENTITY	SPI NUMBER
SPECIAL PACKAGING INSTRUCTION (SPI)		03950	10012
NOMENCLATURE	NATIONAL STOCK NUMBER	DATE	REV
PERISCOPE, SUBMARINE	VARIOUS	11 JULY 01	F
MAXIMUM UNIT	MAXIMUM UNIT	MAXIMUM UNIT	DRAWN BY: RF
QUP PACKAGED WEIGHT	PACKAGED CUBE	PACKAGED DIMENSIONS	APPVD BY: FHS
001	N / A	N / A	N / A
SHEET 1 OF 4			

This Special Instruction outlines general procedures for the packaging /packing of Submarine Periscope critical assemblies. For a more detailed description concerning preservation/packaging, handling, transportation and storage refer to NAVSEA Manual S9425-AH-PRO-010. Procedures for obtaining reusable periscope shipping containers and dimensional drawings for non-reusable containers are detailed in referenced manual. A copy of NAVSEA Manual S9425-AH-PRO-010 may be obtained from:

Standardization Documents Order Desk
 700 Robbins Avenue, Building 4/D
 Philadelphia, PA 19111-5094

1. All individual piece parts of the periscope shall be packaged in separate unit containers as specified in the packaging requirements of MIL-STD-2073. Packing Level shall be Level A.
2. Cleaning shall be in accordance with Cleaning Procedure Code 1 of MIL-STD-2073.
3. Barrier bags shall conform to Type I, Class E, Style 1 of MIL-DTL-117.
4. Desiccant packs shall conform to MIL-D-3464 requirements.
5. Humidity indicators shall be in accordance with MIL-I-8835. Humidity indicators shall be located away from the desiccant packs.
6. Non-tarnishing lens paper shall be in accordance with A-A-50177
7. Cushioning material shall meet the requirements of PPP-C-1842 or an acceptable equivalent.
8. Shipping and storage container procedures shall be in accordance with NAVSEA Manual S9425-AH-PRO-010.

NAVAL INVENTORY CONTROL POINT	CODE IDENTITY	SPI NUMBER	
SPECIAL PACKAGING INSTRUCTION (SPI)	03950	10012	
NOMENCLATURE	NATIONAL STOCK NUMBER	DATE	REV
PERISCOPE, SUBMARINE	VARIOUS	11 JULY 01	F
		SHEET 2 OF 4	

9. Electrostatic Discharge Sensitive (ESDS) components: Several components of the Periscope Set are sensitive to Electrostatic Discharge. Personnel must observe caution when working near these components. Procedures are outlined in MIL-HDBK-263A. Specific units which are ESD sensitive are listed in the referenced NAVSEA manual.

10. Submarine Periscope Preservation/Packaging Procedures:

a. MAST ASSEMBLY:

(1) Install dust caps on electrical connectors located on the bottom of the eyepiece box.

(2) Cover all wave guide openings (if applicable) with a ASTM-D4727 fiberboard cover. Secure with tape in accordance with ASTM-D5486.

(3) Secure the bottom protective cover with 4 hex bolts and lockwashers to the underside of the eyepiece box.

(4) Cover the periscope assembly head section with PPP-C-1842 cushioning, or equivalent, and secure with ASTM-D5486 tape. Caution: Do not attach tape to the painted surfaces of the periscope.

(5) Cover the Periscope Assembly with a MIL-DTL-117, Type 1 barrier bag, evacuate as much air as possible and secure with ASTM-D5486 tape.

(6) Remove the blinder assembly from the eyepiece box and rub with talcum powder. Place in a A-A-3174 plastic bag. Wrap the bagged blinder in PPP-C-1842 cushioning material and place in a MIL-DTL-117, Type 1, barrier bag. Bag closure shall be with ASTM-D5486 tape.

(7) Remove faceplate assembly and wrap with A-A-50177 lens paper. Secure with ASTM-D5486 tape. Wrap the faceplate in PPP-C-1842 cushioning material and place in a MIL-DTL-117, Type 1 barrier bag. Close bag with ASTM-D5486 tape.

NAVAL INVENTORY CONTROL POINT		CODE IDENTITY	SPI NUMBER
SPECIAL PACKAGING INSTRUCTION (SPI)		03950	10012
NOMENCLATURE	NATIONAL STOCK NUMBER	DATE	REV
PERISCOPE, SUBMARINE	VARIOUS	11 JULY 01	F
			SHEET 3 OF 4

b. WRAPPING:

(1) Wrap training handles in PPP-C-1842 cushioning material. Secure with ASTM-D5485 tape and place handle in stowed position.

(2) Wrap eyepiece end of periscope assembly with PPP-C-1842 cushioning material and secure with ASTM-D5486 tape. Caution: Do not extend cushioning material more than two feet from eyepiece end of periscope assembly.

(3) Cover the eyepiece box with a MIL-DTL-117, Type 1 barrier bag. Evacuate as much air as possible and secure with ASTM-D5486 tape.

CAUTION: The outer barrel of the periscope is machined to precise tolerances and must be protected from scratches during handling.

c. INSTALLATION OF PERISCOPE ASSEMBLY INTO SPECIAL SHIPPING CONTAINER

(1) Clean all grease and dirt from the periscope assembly.

(2) Vacuum the interior of the shipping container.

(3) Attach hoisting and safety clamps to the periscope assembly. This task is to be performed in accordance with applicable handling regulations by qualified personnel.

(4) The hoisting clamps and slings shall not be attached within 99 inches of the head window assembly, due to the upper portion of the mast being tapered, slippage may occur. To prevent damage to the mast surfaces, the use of hoisting clamps with setscrews is prohibited. Never attach clamps or slings to eyepiece box.

(5) Lift the periscope assembly horizontally. Caution: Slings must be positioned to avoid contact with the cradles in the container.

NAVAL INVENTORY CONTROL POINT	CODE IDENTITY	SPI NUMBER	
SPECIAL PACKAGING INSTRUCTION (SPI)	03950	10012	
NOMENCLATURE	NATIONAL STOCK NUMBER	DATE	REV
PERISCOPE, SUBMARINE	VARIOUS	11 JULY 01	F
		SHEET 4 OF 4	

(6) Lower the periscope onto the cradles of the container. The head end must fit into the smaller cradle. During the lowering process, position the training handles in the horizontal position and the focusing knob toward the upper cover of the container.

(7) Remove all hoist slings and safety clamps. Close and secure periscope hold-down clamps. Torque hold-down clamp bolts to 38, plus or minus 2 foot pounds to prevent longitudinal movement of the periscope in the container.

(8) Place packaged faceplate and blinder in a MIL-DTL-117 barrier bag and tape to the upper side of the eyepiece with ASTM-D5486 tape.

(9) Place top cover on shipping container and secure with clamps. Binding is required if clamps are broken or missing.

(10) Attach or tape a label to the outside of the container marked "HEAD WINDOW END", on the head window end of the shipping container.

d. MARKING AND LABELING:

(1) In addition to MIL-STD-129 markings the following applies:

Stencil the periscope assembly shipping container serial number in 2 inch black lettering on the upper half of each end of the shipping container. Obliterate any old serial numbers with gray paint.

If a serial number is not available, one may be requested from the Periscope Data Center, INUSC/NLL: DSN 636-4638, Commercial 203 447-4638. The shipping container length shall be provided to the Data Center by the shipping activity.

Stencil in the 2 inch black lettering on the lower half of each end of the container the type of periscope mast and registry number.

NAVAL INVENTORY CONTROL POINT		CODE IDENTITY	SPI NUMBER	
SPECIAL PACKAGING INSTRUCTION (SPI)		03950	10048	
NOMENCLATURE: PACKAGING OF FERROUS/NONFERROUS BOLTS, SCREWS AND STUDS (UNIT OF ISSUE: BOX)		NATIONAL STOCK NUMBER VARIOUS	DATE 2 AUG 01	REV G
QUP	MAXIMUM UNIT PACKAGED WEIGHT	MAXIMUM UNIT PACKAGED CUBE	MAXIMUM UNIT PACKAGED DIMENSIONS	DRAWN BY: RF APPVD BY: FHS
001	N/A	N/A	N/A	SHEET 1 OF 2

PRESERVATION/PACKAGING OF FERROUS/NONFERROUS BOLTS, SCREWS AND STUDS

Method Of Preservation - Package Method 10 or 20 as follows:
 Each bolt/stud/screw shall have the shank and threads protected by a sleeve extending over the full length of the shank and thread. The sleeve shall be manufactured from paperboard, asphalt impregnated chipboard, or a spiral wrap of kraft paper over chipboard, lined with material conforming to MIL-PRF-121. Cylindrical shaped flexible plastic netted stock sleeving may be used. For Method 20, when preservative is specified, the flexible plastic netted sleeves shall be of sufficient thickness and adequate strength to prevent damage by the threads during handling, storage and transportation. The sleeves shall not be force fitted over the fasteners. The sleeve size shall permit ease in removal and replacement for inspection purposes. The use of individual wraps, bags and/or cushioning material secured by tape is prohibited.

The Quantity Per Unit pack ("BOX") specified in the contract/order shall be packaged in a folding, metal-stayed setup or fiberboard box conforming to PPP-B-566, PPP-B-676 or ASTM-D5118. If ASTM-D5118 is selected, closure method shall be in accordance with ASTM-D1974. The unit container (box) shall provide a snug fit for the items within.

For Method 20, preservative will be in accordance with MIL-PRF-16173, Grades 1, 2, 3, 4, Or 5. Non-greaseproof boxes will be lined with MIL-PRF-121, Grade A grease proof barrier material.

Box voids resulting from irregularly shaped loads shall be filled with cushioning material meeting the general requirements of MIL-STD-2073, to provide a compact, minimum cube, non-shifting load. The use of loose fill cushioning materials is prohibited.

NAVAL INVENTORY CONTROL POINT		CODE IDENTITY	SPI NUMBER
SPECIAL PACKAGING INSTRUCTION (SPI)		03950	10048
NOMENCLATURE: PACKAGING OF FERROUS/NONFERROUS BOLTS SCREWS AND STUDS (UNIT OF ISSUE: BOX)	NATIONAL STOCK NUMBER VARIOUS	DATE 2 AUG 01	REV G
			SHEET 2 OF 2

Unit package markings in accordance with MIL-STD-129 shall be placed on the exterior of the unit container.

For LEVEL I/SUBSAFE bolts, screw and studs, additional special markings will be as follows:

"LEVEL I" in **red** letters, maximum 2 inches in height, will appear on two sides and two ends of the unit container.

Overpacking for shipment shall be as specified in MIL-STD-2073 using the following applicable levels of packing:

Domestic (CONUS) shipment ----- ASTM-D3951

Overseas (XCONUS) shipment:

- Via Surface ----- Level A
- Via Freight Forwarder ----- Level B
- Via APO/FPO ----- Level B
- Via Air ----- Level B

NAVAL INVENTORY CONTROL POINT		CODE IDENTITY	SPI NUMBER
SPECIAL PACKAGING INSTRUCTION (SPI)		03950	10052
NOMENCLATURE	NATIONAL STOCK NUMBER	DATE	REV
CYLINDER/FLASK, COMPRESSED GAS	1H 2090-00-148-1042	6 AUG 01	B
QUP	MAXIMUM UNIT PACKAGED WEIGHT	MAXIMUM UNIT PACKAGED CUBE	MAXIMUM UNIT PACKAGED DIMENSIONS
010	2,000lbs.	38.90 CU. FT.	40 X 56 X 30
DRAWN BY: RF APPVD BY: FHS			
SHEET 1 OF 3			

Cylinder/Flask shall be manufactured in accordance with MIL-F-22606. A specially designed pallet is required for shipment.

SERVICE "A" FLASKS

PACKING LEVEL A

Flasks filled with Nitrogen shall be packed for shipment as follows:

Type GF and SF shall be palletized for shipment in accordance with enclosed illustrations. Configurations and design of the special length pallet shall conform to the basic pallet specification Federal Standard NN-P-71, with the following exceptions:

PALLET SHALL MEASURE 40 INCHES BY 56 INCHES WIDE

Notched wood spacers fabricated from hardwood, such as birch, elm, maple or oak shall be provided. The spacers will be notched or recessed across opposing faces at regular intervals along the length of the pallet. The notches will be cut to fit snugly around part of the perimeter of the flasks. The wood spacer will be used with framed loads of unboxed cylinder units, that are stacked horizontally to stabilize the load and protect the units from damage during shipment. Three spacers are required for safe horizontal stacking. The spacers will be placed under the load at right angles the length of the flasks. An equal number of spacers will be used between each of flasks, excluding the top. The length of the spacers will be sufficient to extend to/or slightly beyond the edge of the load.

MAXIMUM OF TWO COURSES OF FLASKS PER SPECIAL DESIGNED PALLET, FIVE FLASKS TO A COURSE.

NAVAL INVENTORY CONTROL POINT	CODE IDENTITY	SPI NUMBER	
SPECIAL PACKAGING INSTRUCTION (SPI)	03950	10052	
NOMENCLATURE	NATIONAL STOCK NUMBER	DATE	REV
CYLINDER/FLASK, COMPRESSED GAS	1H 2090-00-148-1042	6 AUG 01	B
		SHEET 2 OF 3	

Secure the load to the pallet as follows:

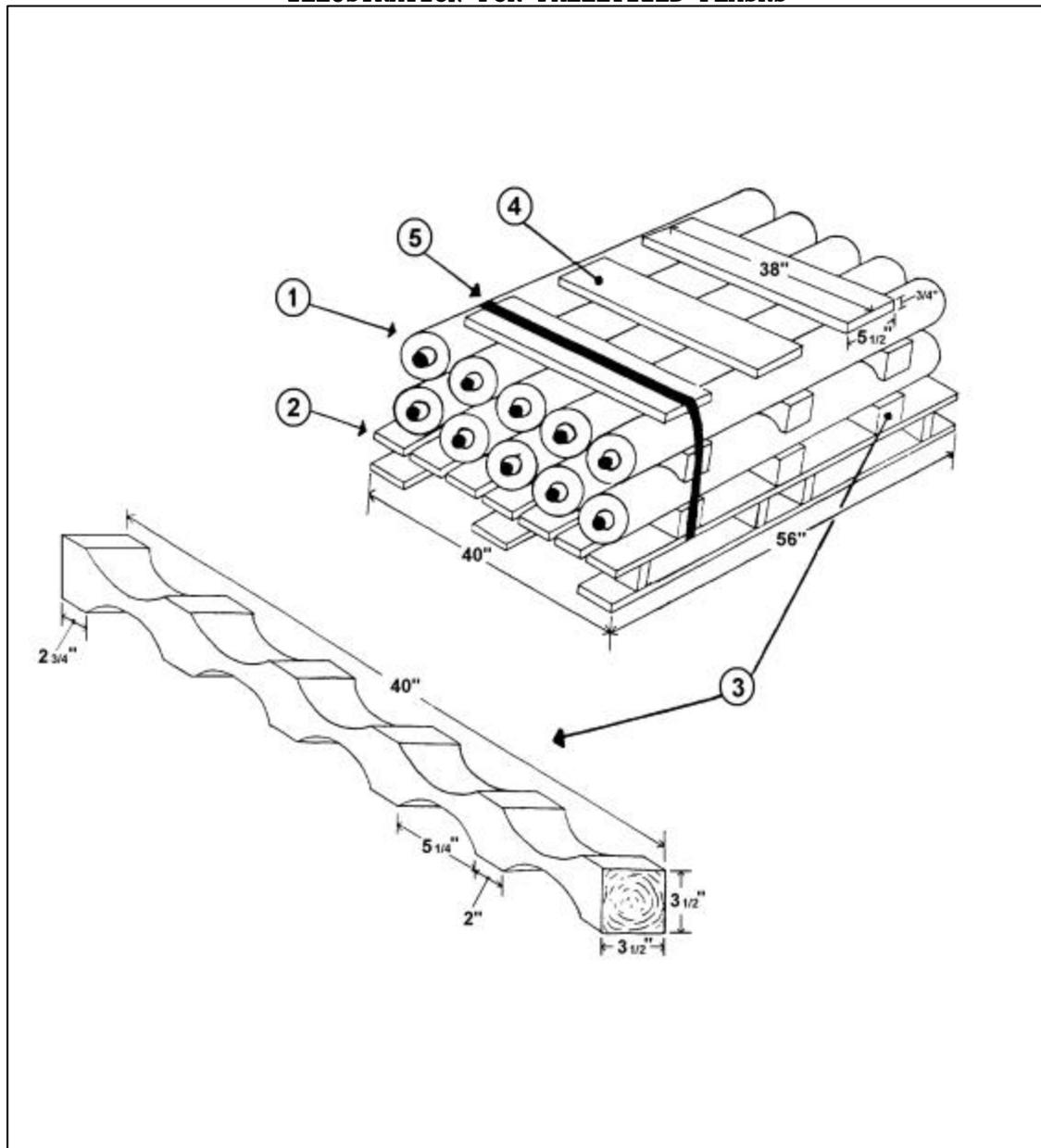
- (a) Position three each "over the load" type battens, equally spaced, paralleling the width of the pallet, in alignment with the three notched spacers.
- (b) Secure the load to the pallet with steel banding. The banding will pass over the battens and across the edges of the notched spacers. The banding will be applied straight and tensioned equally to prevent looseness on the side or top of the load. Straps will be held by the appropriate seals.

ILLUSTRATION FOR PALLETIZED FLASKS, SHEET 3

- (1) Flasks (54" X 7" X 7") two rows of 5 each maximum.
- (2) Pallet (special width) 56" wide by 40" long.
- (3) Notched spacers, 6 each, 40" in length.
- (4) Battens ("over the load" type) 3 each fabricated from 1" lumber or ½" plywood X 6" wide, to bridge the palletized flasks.
- (5) Steel strapping over edges of notched spacers and across battens, secured to pallet at three places.

NAVAL INVENTORY CONTROL POINT	CODE IDENTITY	SPI NUMBER	
SPECIAL PACKAGING INSTRUCTION (SPI)	03950	10052	
NOMENCLATURE	NATIONAL STOCK NUMBER	DATE	REV
CYLINDER/FLASK, COMPRESSED GAS	1H 2090-00-148-1042	6 AUG 01	B
			SHEET 3 OF 3

ILLUSTRATION FOR PALLETIZED FLASKS



NAVAL INVENTORY CONTROL POINT		CODE IDENTITY	SPI NUMBER
SPECIAL PACKAGING INSTRUCTION (SPI)		03950	10054
NOMENCALTURE	NATIONAL STOCK NUMBER	DATE	REV
SUBMARINE ANTENNA MAST	7H 5895-01-279-1999	1 AUG 01	C
QUP	MAXIMUM UNIT PACKAGED WEIGHT	MAXIMUM UNIT PACKAGED CUBE	MAXIMUM UNIT PACKAGED DIMENSIONS
001	400 LBS.	3.55 CU. FT.	170" X 6" X 6"
DRAWN BY: RF APPVD BY: FHS			
SHEET 1 OF 1			

Packaging shall be in accordance with MIL-STD-2073 as follows:

H	M	QUP	ICQ	MTHD	D	MATL	MATL	DUNN	T	CTNR	P	CTR	L	MKG	CODE	WGHT	CUBE	P	I
N	001	000	10	1	00	00	ZZ	Z	ZZ	A	ZZ	A	ZZ	FFF	400	3.6	A		

This Special Instruction outlines general procedures for the packaging/packing of Submarine Antenna Masts.

1. Cover the ends of the antenna mast with a plywood cover, fabricated from ¼ inch plywood, to prevent entrance of foreign objects. Secure covers to the mast ends with bolts, washers and nuts. Mark covers:

REMOVE PRIOR TO MAST INSTALLATION"

2. Place the antenna mast into a water resistant fiber tube (5" inside diameter with a wall thickness of 0.5"). The length of the tube shall be approximately 170 inches. The exterior of the tube shall have a double asphalt outer wrap fabricated in accordance with MIL-P-20293 (Asphalt Impregnated Kraft Paper). Equivalent asphalt impregnated tubes may be used. Block and brace the antenna inside the fiber tube on both ends with PPP-C-1120C (Uncompressed Bound Fiber, Class A, Grade 1) cushioning material to prevent for and aft movement of the antenna mast inside the shipping tube. Tube closure on both ends shall be accomplished using 5" diameter wooden shipping plugs. Plugs shall be driven into the ends with a rubber mallet and secured with nails or industrial staples.

3. In addition to MIL-STD-129 marking requirements, the following markings shall be applied in dark lettering to the shipping tube along the length in 2 areas:

"DO NOT SLING LOAD FROM ENDS"

NAVAL INVENTORY CONTROL POINT		CODE IDENTITY	SPI NUMBER
SPECIAL PACKAGING INSTRUCTION (SPI)		03950	10083
NOMENCALTURE	NATIONAL STOCK NUMBER	DATE	REV
BALL AND SEAT ASSEMBLIES	VARIOUS	14 AUG 01	D
MAXIMUM UNIT	MAXIMUM UNIT	MAXIMUM UNIT	DRAWN BY: RF
QUP PACKAGED WEIGHT	PACKAGED CUBE	PACKAGED DIMENSIONS	APPVD BY: FHS
001	40 + LBS.	VARIOUS	VARIOUS
SHEET 1 OF 5			

Packaging shall be in accordance with MIL-STD-2073 as follows:

H	M	QUP	ICQ	MTHD	D	MATL	MATL	DUNN	T	CTNR	P	CTR	L	MKG	CODE	WGHT	CUBE	I
N	001	000	ZZ	1	00	XX	XX	X	XX	A	XX	A	XX	FFF	40+			A

This Special Packaging Instruction is applicable to straight ball valves and seat assemblies weighing over 40 pounds and less than 16 feet in length.

Packaging will be in accordance with **Method 10** of MIL-STD-2073, and the following steps, using the enclosed drawing.

Step 1. Wrap Ball Assembly (Item 1) in MIL-P-130 laminated crepe paper.

Step 2. Wrap and cushion Seat Assembly (Item 2) with PPP-C-1120, Class A, Grade 3, to provide adequate protection from damage. Seal unit container with pressure sensitive tape in accordance with ASTM-D5486.

Step 3. Place Seat Assembly in an intermediate container conforming to ASTM-D5118, Type CF, weather resistant. Exterior dimensions of the fiberboard container will allow sufficient clearance for bolts (F) to protrude through the edges of the hold-down cover (B).

Step 4. Secure disc (C) with square headed bolts, washers and nuts (E) to center of base (G). Fasteners will be equally spaced. The disc will be fabricated from 3/4" plywood with a diameter of 1/8" smaller than the diameter of the ball cavity. Square headed bolts will be 2 1/2" long.

NAVAL INVENTORY CONTROL POINT		CODE IDENTITY	SPI NUMBER
SPECIAL PACKAGING INSTRUCTION (SPI)		03950	10083
NOMENCLATURE	NATIONAL STOCK NUMBER	DATE	REV
BALL AND SEAT ASSEMBLIES	VARIOUS	14 AUG 01	D
			SHEET 2 OF 5

Step 5. Place wrapped Ball Assembly (Item 1) on disc (C). The disc must fit snugly and evenly in the ball cavity.

Step 6. Install the 4 rod bolts (F) to extend through the skids. Select the length of bolts to allow for skid, floor and hold-down cover thickness plus a minimum protrusion of no more than 2 threads after tightening.

Step 7. Install hold-down cover (B) and disc (C) over the 4 tie rod bolts (F) and the wrapped Ball Assembly. Assure that the disc is properly seated in the center of the Ball Assembly. Install flat washers, lock washers and nuts (D). Tighten to prevent movement of the Ball Assembly. The hold-down cover (B) will be fabricated from

Step 8. Fasten the packaged Seat Assembly (A) to the top of the cover (B) with non-metallic strapping or connectors conforming to ASTM-D3950.

Step 9. Mark the top of the packaged Seat Assembly (A) with the following:

"SEAT ASSEMBLY INSIDE"

Step 10. Mount the MIL-B-26195 unit container (H) to the base (G). Caution: Ensure that the fabrication of the load bearing base (G) and box (H) allows for a minimum of 2" clearance around the sides and ends of the Ball Assembly and Seat Assembly (A). The load bearing base (G) will be fabricated from class 2 lumber, using load "C" configuration, in accordance with MIL-B-26195.

Step 11. Secure box (H) to base (G) using 3" long lag bolts in accordance with the instructions in the appendix of MIL-B-26195.

NAVAL INVENTORY CONTROL POINT		CODE IDENTITY	SPI NUMBER
SPECIAL PACKAGING INSTRUCTION (SPI)		03950	10083
NOMENCLATURE	NATIONAL STOCK NUMBER	DATE	REV
BALL AND SEAT ASSEMBLIES	VARIOUS	14 AUG 01	D
			SHEET 3 OF 5

Step 12. Additional markings will be placed on the exterior of the MIL-B-26195 unit container as follows:

- a. "REUSABLE CONTAINER, DO NOT DESTROY" will be marked on one side and one end of the unit container, with minimum 2" high black lettering.
- b. "TO OPEN, REMOVE BOLTS" will be marked on one side and one end of the unit container, with minimum 2" high black lettering.
- c. An arrow 222 indicating "up" will be placed in appropriate locations on the top, sides and ends of the unit container.
- d. All markings will be in accordance with MIL-STD-129.

BILL OF MATERIALS (See drawing on page 5)

- A** - ASTM-D5118 intermediate fiberboard container, type CF, weather resistant, 1 each.
- B** - Plywood hold-down cover, 3/4", 1 each.
- C** - Plywood disc, 3/4", 2 each.
- D** - Flat washers, lock washers, square nuts, 4 each.
- E** - Square headed bolts, flat washers, square nuts, 6 each.
- F** - Long bolts, 4 each.
- G/H**-Unit container box with load-bearing base, MIL-B-26195, style A, overseas type II.
- L** - Long bolts, 4 each.

Note: The above listed hardware will meet the performance characteristics for the intended weight load. Hardware will be corrosion resistant or coated with preservative conforming to MIL-PRF-16173, Grade 4.

NAVAL INVENTORY CONTROL POINT	CODE IDENTITY	SPI NUMBER	
SPECIAL PACKAGING INSTRUCTION (SPI)	03950	10083	
NOMENCLATURE	NATIONAL STOCK NUMBER	DATE	REV
BALL AND SEAT ASSEMBLIES	VARIOUS	14 AUG 01	D
		SHEET 4 OF 5	

UNPACKING INSTRUCTIONS FOR BALL AND SEAT ASSEMBLIES

Step 1. Remove lag bolts that fasten the bottom of the MIL-B-26195 unit container (H) to base (G). Retain lag bolts for reuse.

Step 2. Carefully remove the MIL-B-26195 unit container (H) from base (G). Caution: Be careful not to damage contents of container.

Step 3. Remove straps securing packaged Seat Assembly Box (A) and remove from hold-down cover (B).

Step 4. Carefully open taped end of boxed Seat Assembly (A) and remove wrapped Seat Assembly (Item 2). Remove cushioning material. Retain fiberboard intermediate box and cushioning material for reuse.

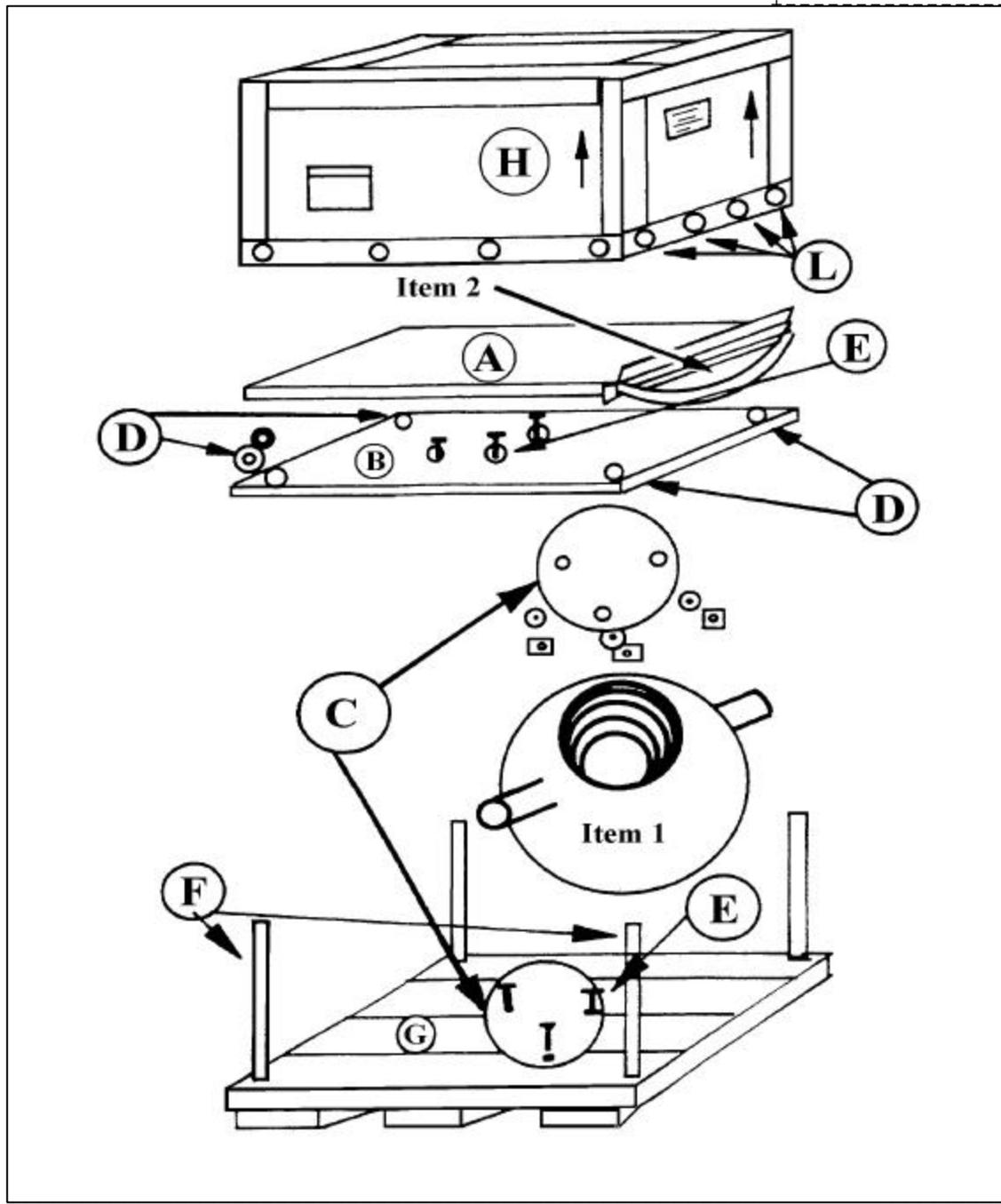
Step 5. Remove flat washers, lock washers and nuts (D) from the hold-down cover assembly (B), which secures the Ball Assembly (Item 1) to base (G). Remove hold-down cover. Retain cover and hardware for reuse.

Step 6. If unpacking is required for inspection, follow step 7. Remove Ball Assembly (Item 1) from skidded base (G). Caution: If the Ball Assembly is extremely heavy to lift manually, use a fabric sling assembly.

Step 7. Carefully unwrap the Ball Assembly (Item 1). Retain all wrapping, packaging and cushioning material for reuse on repairable ball assemblies of the same configuration.

NAVAL INVENTORY CONTROL POINT	CODE IDENTITY	SPI NUMBER	
SPECIAL PACKAGING INSTRUCTION (SPI)	03950	10083	
NOMENCLATURE	NATIONAL STOCK NUMBER	DATE	REV
BALL AND SEAT ASSEMBLIES	VARIOUS	14 AUG 01	D

BILL OF MATERIALS (See Sheet 3) SHEET 5 OF 5



MARKING REQUIREMENTS FOR LI/SS STOCK PROGRAM MATERIAL

1. In addition to any special markings specified in this instruction, all unit/shipping containers and palletized unit loads will be marked in accordance with MIL-STD-129.

UNIT/INTERMEDIATE CONTAINER MARKINGS:

- * NATIONAL STOCK NUMBER
- * ITEM DESCRIPTION
- * QUANTITY AND UNIT OF ISSUE
- * CONTRACT OR ORDER NUMBER
- * SERIAL NUMBER (WHEN APPLICABLE)
- * SHELF-LIFE MARKINGS (WHEN APPLICABLE)
- * MATERIAL IDENTIFICATION AND CONTROL (MIC) NUMBER

2. Precautionary markings necessary for full protection of the item will be prominently located as specified in MIL-STD-129.

3. In the event the same shipping container is used to ship multiple stock numbered LEVEL I items, each item will be identified with the applicable National Stock Number. The shipping container will include a packing list of each stock number per the requirements of MIL-STD-129.

4. Each item packaged in a unit container and marked in accordance with MIL-STD-129 will have the Material Identification And Control (MIC) Number applied to the unit package as indicated on the drawing below.

5. Each unit/shipping container will be marked with **red** letters, maximum two inches high, "LEVEL I" on the top, bottom and both sides.

