

INCH-POUND

MIL-S-196D

15 July 1988

SUPERSEDING

MIL-R-196C

15 November 1977

(See 6.9)

MILITARY SPECIFICATION

SUPPORT ITEMS, ACCESSORIES, AND KITS, MECHANICAL;
PACKAGING OF

This specification is approved for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification covers the requirements for packaging (preservation, packing, and marking) of mechanical support items (see 6.4.2.12), spare and repair parts, accessories, and kits for systems and equipments such as, but not necessarily limited to: internal combustion engines (diesel, gas); turbines (gas, steam); machinery (winches, capstans, metal and wood working); pumps; compressors; and related mechanical or nonelectrical type equipment requiring maintenance and overhaul replacement items or assemblies.

1.2 Levels of protection.1.2.1 Preservation.

Level A (see 3.9.1.1)
Level B (see 3.9.1.2)
Level C (see 3.9.1.3)
Commercial (see 3.9.1.4)

1.2.2 Packing.

Level A (see 3.9.2.2)
Level B (see 3.9.2.3)
Level C (see 3.9.2.4)
Commercial (see 3.9.2.5)

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Commander, Naval Sea Systems Command, SEA 5523, Department of the Navy, Washington, DC 20362-5101 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.
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2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications and standards. The following specifications and standards form a part of this specification to the extent specified herein. Unless otherwise specified, the issues of these documents shall be those listed in the issue of the Department of Defense Index of Specifications and Standards (DoDISS) and supplement thereto, cited in the solicitation.

SPECIFICATIONS

FEDERAL

- | | |
|------------|---|
| L-P-378 | - Plastic Sheet and Strip, Thin Gauge, Polyolefin. |
| O-S-801 | - Sulfuric Acid, Electrolyte; for Storage Batteries. |
| TT-P-664 | - Primer Coating, Synthetic, Rust-Inhibiting, Lacquer-Resisting. |
| UU-P-268 | - Paper, Kraft, Wrapping. |
| PPP-B-566 | - Boxes, Folding, Paperboard. |
| PPP-B-576 | - Boxes, Wood, Cleated, Veneer, Paper Overlaid. |
| PPP-B-585 | - Boxes, Wood, Wirebound. |
| PPP-B-591 | - Boxes, Shipping, Fiberboard, Wood-Cleated. |
| PPP-B-601 | - Boxes, Wood, Cleated-Plywood. |
| PPP-B-621 | - Boxes, Wood, Nailed and Lock-Corner. |
| PPP-B-636 | - Boxes, Shipping, Fiberboard. |
| PPP-B-640 | - Boxes, Fiberboard, Corrugated, Triple-Wall. |
| PPP-B-665 | - Boxes: Paperboard, Metal Edged and Components. |
| PPP-B-676 | - Boxes, Setup. |
| PPP-B-1055 | - Barrier Material, Waterproofed, Flexible. |
| PPP-B-1672 | - Boxes, Shipping, Reusable with Cushioning. |
| PPP-C-96 | - Cans, Metal, 28 Gage and Lighter. |
| PPP-C-795 | - Cushioning Material, Packaging (Flexible Cellular, Plastic Film) for Packaging Applications. |
| PPP-C-843 | - Cushioning Material, Cellulosic. |
| PPP-C-850 | - Cushioning Material, Polystyrene, Expanded, Resilient (For Packaging Uses). |
| PPP-C-1120 | - Cushioning Material, Uncompressed Bound Fiber for Packaging. |
| PPP-C-1752 | - Cushioning Material, Packaging, (Unicellular Polyethylene Foam, Flexible). |
| PPP-C-1797 | - Cushioning Material, Resilient, Low Density, Unicellular, Polypropylene Foam. |
| PPP-C-1842 | - Cushioning Material, Plastic, Open Cell (For Packaging Applications). |
| PPP-F-320 | - Fiberboard; Corrugated and Solid, Sheet Stock (Container Grade), and Cut Shapes. |
| PPP-H-1581 | - Hardware (Fasteners and Related Items), Packaging of. |
| PPP-P-40 | - Preservation and Packing of Hand Tools; Tools and Tool Accessories for Power Driven, Metal and Woodworking Machinery. |

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FEDERAL (Continued)

- PPP-P-291 - Paperboard, Wrapping and Cushioning.
- PPP-T-60 - Tape: Packaging, Waterproof.

MILITARY

- MIL-V-3 - Valves, Fittings, and Flanges (Except for Systems Indicated Herein); Packaging of.
- MIL-P-116 - Preservation, Methods of.
- MIL-B-121 - Barrier Material, Greaseproofed, Waterproofed, Flexible.
- MIL-B-197 - Bearings, Antifriction; Associated Parts and Subassemblies; Preparation for Delivery of.
- MIL-B-233 - Boxes, Supply Support Items, Stowage and Storage.
- MIL-P-775 - Packaging of Hose, Hose Assemblies; Rubber, Plastic, Fabric, or Metal (Including Tubing); and Fittings, Nozzles, and Strainers.
- MIL-B-3106 - Board, Composition, Water-Resistant, Solid (For Filler and Cushioning Pads).
- MIL-C-3955 - Cans, Composite, Spirally Wound.
- MIL-P-4861 - Packing, Preformed, Rubber, Packaging of.
- MIL-R-5001 - Rubber Cellular Sheet, Molded and Hand Built Shapes; Latex Foam.
- MIL-C-5501 - Caps and Plugs, Protective, Dust and Moisture Seal General Specification for.
- MIL-D-6055 - Drums, Metal Reusable, Shipping and Storage (Cap. From 88 to 510 Cubic Inches).
- MIL-R-6130 - Rubber, Cellular, Chemically Blown.
- MIL-I-8574 - Inhibitors, Corrosion, Volatile, Utilization of.
- MIL-E-10062 - Engines: Preparation for Shipment and Storage of.
- MIL-C-12000 - Cable, Cord, and Wire, Electric; Packaging of.
- MIL-V-13811 - Varnish, Waterproofing, Electrical, Ignition.
- MIL-E-16298 - Electric Machines Having Rotating Parts and Associated Repair Parts: Packaging of.
- MIL-P-16789 - Pumps (Including Prime Movers and Support Items); Packaging of.
- MIL-P-17286 - Propulsion and Auxiliary Steam Turbines and Gears (Including Repair Parts, Tools, Accessories and Instruments): Packaging of.
- MIL-E-17555 - Electronic and Electrical Equipment, Accessories, and Provisioned Items (Repair Parts): Packaging of.
- MIL-L-19140 - Lumber and Plywood, Fire-Retardant Treated.
- MIL-P-19644 - Plastic Molding Material (Polystyrene Foam, Expanded Bead).
- MIL-R-20092 - Rubber or Plastic Sheets and Assembled and Molded Shapes, Synthetic, Foam or Sponge, Open Cell.
- MIL-B-22019 - Barrier Materials, Transparent, Flexible, Sealable, Volatile Corrosion Inhibitor Treated.
- MIL-B-22020 - Bags, Transparent, Flexible, Sealable, Volatile Corrosion Inhibitor Treated.
- MIL-B-22191 - Barrier Materials, Transparent, Flexible, Heat-Sealable.

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MILITARY (Continued)

- MIL-A-25175 - Air Transport, Nontactical, Packing for.
- MIL-P-26514 - Polyurethane Foam, Rigid or Flexible, for Packaging.
- MIL-C-26861 - Cushioning Material, Resilient Type, General.
- MIL-T-45542 - Tool Sets, Shop Sets and Kits Maintenance, Modification and Tool Packaging of.
- MIL-C-55442 - Cable Assemblies and Cord Assemblies, Packaging of.
- MIL-F-81334 - Foam, Plastic, Flexible, Open Cell Polyester Type, Polyurethane.
- MIL-F-87090 - Foam, Combustion Retardant, for Cushioning Supply Items Aboard Navy Ships.

STANDARDS

FEDERAL

- FED-STD-313 - Material Safety Data, Transportation Data and Disposal Data for Hazardous Materials Furnished to Government Activities.

MILITARY

- MIL-STD-129 - Marking for Shipment and Storage.
- MIL-STD-147 - Palletized Unit Loads.
- MIL-STD-758 - Packaging Procedures for Submarine Repair Parts.
- MIL-STD-1186 - Cushioning, Anchoring, Bracing, Blocking and Waterproofing; with Appropriate Test Methods.
- MIL-STD-1367 - Packaging, Handling, Storage, and Transportability Program Requirements (For Systems and Equipments).
- MIL-STD-2073-1 - DoD Materiel Procedures For Development and Application of Packaging Requirements.

2.1.2 Other Government publication. The following other Government publication forms a part of this specification to the extent specified herein. Unless otherwise specified, the issues shall be those in effect on the date of the solicitation.

CODE OF FEDERAL REGULATIONS (CFR)

29 CFR 1910.1200 - Hazard Communication Standard.

(Application for copies should be addressed to the Superintendent of Documents, US Government Printing Office, Washington, DC 20402.)

(Copies of specifications, standards, and publications required by contractors in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting activity.)

2.2 Other publications. The following documents form a part of this specification to the extent specified herein. Unless otherwise specified, the issues of the documents which are DoD adopted shall be those listed in the issue of the DoDISS specified in the solicitation. Unless otherwise specified, the issues of documents not listed in the DoDISS shall be the issue of the nongovernment documents which is current on the date of the solicitation.

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AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

D 996 - Standard Terminology of Packaging and Distribution
Environments. (DoD adopted)

D 3951 - Standard Practice for Commercial Packaging.
(DoD adopted)

(Application for copies should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.)

(Nongovernment standards and other publications are normally available from the organizations which prepare or which distribute the documents. These documents also may be available in or through libraries or other informational services.)

2.3 Order of precedence. When an equipment or item is acquired in conformance with a commodity specification, having detailed packaging or preparation for delivery requirements which differ from this specification, the packaging or preparation for delivery specified in the commodity specification shall apply.

3. REQUIREMENTS

3.1 Definitions or explanation of packaging terms. Definitions or explanation of packaging terms applicable to this specification shall be as stated in the applicable referenced specification and as specified in 6.4. For definitions or explanation of packaging terms not specified therein, MIL-P-116 and ASTM D 996 shall apply.

3.2 First article. When specified in the contract or purchase order, a sample shall be subjected to first article inspection (see 4.4 and 6.3).

3.2.1 Dummy or simulated load. When specified (see 6.2.1), a dummy or simulated load may be used for the rough handling tests (see 4.4.2). When a dummy or simulated load is substituted for the actual equipment or item in performing the rough handling tests, instrumentation of the pack is required for assurance that the acceleration of the packed item during the tests is less than the fragility rating of the item. If this alternative load is used, the contractor shall prepare a notification of tests (see 6.2.2).

3.3 Materials. Packaging materials shall be as specified herein and in the applicable referenced specifications.

3.3.1 Recovered materials. Unless otherwise specified herein, all equipment, material, and articles incorporated in the products covered by this specification shall be new and may be fabricated using materials produced from recovered materials to the maximum extent practicable without jeopardizing the intended use. The term "recovered materials" means materials which have been collected or recovered from solid waste and reprocessed to become a source of raw materials, as opposed to virgin raw materials. Unless otherwise specifically specified, none of the above shall be interpreted to mean that the use of used or rebuilt products is allowed under this specification.

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3.3.2 New materials. The use of newly developed packaging materials or procedures are encouraged and recommended and will be permitted under the conditions specified herein, provided they are equal to or better than the specified materials or procedures and there is no additional cost to the Government.

3.3.2.1 Certification of new materials. If the contractor desires to use materials or procedures other than those specified herein, he shall furnish a certificate of compliance (see 6.2.2). If, after a review of the material or procedure and the related documented evidence, or the witnessing of the stipulated tests, it is the opinion of the contracting activity that the material or procedure meets or exceeds the requirements specified herein, interim authorization for use will be granted until preparation of a new specification or revision of an existing specification.

3.3.3 Asbestos.

3.3.3.1 Packaging materials. Asbestos or material and items containing asbestos shall be excluded from use in the packaging of material or items covered by this specification (see 6.5).

3.3.3.2 Packaged items. Asbestos, and separately packaged components containing asbestos that is predominately distributed throughout the item, shall be packaged in sealed, dust-proof and sift-proof packages. Flexible packages shall be heat sealed. All packages shall be marked (see 3.9.3).

3.3.3.3 Dusting material. Dusting material such as talcum shall be asbestos-free. When specified in the contract or order, a certificate of compliance shall be prepared (see 6.2.2).

3.3.4 Cushioning and wrapping materials. The use of excelsior, newspaper, shredded paper (all types) and similar hygroscopic or nonneutral materials and all types of loose fill material (for applications such as cushioning, fill, stuffing, and dunnage) shall be prohibited. Materials selected for cushioning and wrapping shall have properties (characteristics) resistant to fire (see 3.9.1.1.1).

3.4 Technical data. Complete descriptive packaging details on drawings, test results, and packaging and transportation data requirements are not required when such were previously submitted and accepted by the contracting activity.

3.4.1 Drawings. When specified in the contract or order, drawings or special packaging instructions shall be prepared (see 6.2.2).

3.4.2 Preservation and packing data. When specified in the contract or order, preservation and packing data shall be prepared (see 6.2.2).

3.4.3 Packaging, handling, storage and transportability plan (PHST). When specified in the contract or order, a PHST shall be prepared (see 6.2.2). The plan, when required, shall be tailored for the applicable system or equipment acquisition in accordance with the requirements of MIL-STD-1367.

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3.4.4 Material safety data sheet (MSDS). The contracting activity shall be provided a material safety data sheet (MSDS) at the time of contract award. The MSDS shall be provided in accordance with the requirements of FED-STD-313 and 29 CFR 1910.1200. When FED-STD-313 is at variance with the CFR, 29 CFR 1910.1200 shall take precedence, modify and supplement FED-STD-313. The MSDS shall be included with each shipment of the material covered by this specification (see 6.7).

3.5 Lubrication. Rotating joints, bearings, and similar moving items and assembled units requiring lubrication for service use shall be lubricated. The lubricant shall be as specified in the equipment specification or as approved by the contracting activity. Excess lubricants shall be removed prior to packing operations.

3.6 Unit pack quantity. Unless otherwise specified (see 6.2.1), material shall be unit protected one for each unit pack except that all parts comprising a single set or assembly shall be individually unit protected within a unit pack. When unit protected as a set, assembly, or quantity greater than one, each item shall be wrapped or cushioned to prevent damage resulting from direct surface contact with the surfaces of the adjacent items.

3.7 Sealing of openings. Small openings shall be sealed with pressure sensitive tape conforming to class 1 of PPP-T-60. Large openings shall be covered with waterproof paper conforming to class E-2 of PPP-B-1055 and secured with tape as specified herein. When openings are covered, and the covering is vulnerable to puncture or damage, the covering shall be further protected by hardboard, wood, plywood, plastic or metal cover. The open ends of all piping and fittings shall be sealed with plastic plugs or caps conforming to MIL-C-5501.

3.8 Navy fire-retardant requirements.

- (a) Lumber and plywood. Unless otherwise specified (see 6.2.1), all lumber and plywood including laminated veneer material used in shipping container construction members, blocking, bracing, and reinforcing shall be fire-retardant treated material conforming to MIL-L-19140 as follows:

Levels A and B - Type II - weather resistant.

Category 1 - general use.

Level C - Type I - non-weather resistant.

Category 1 - general use.

- (b) Fiberboard. Unless otherwise specified (see 6.2.1), fiberboard used in the construction of class-domestic, non-weather resistant fiberboard and cleated fiberboard boxes including interior packing forms shall meet the flamespread and the specific optic density requirements of PPP-F-320.

3.9 Level of protection (see 6.4.1).

3.9.1 Preservation. Preservation (unit protection) shall be level A, B, C, or commercial, as specified (see 6.2.1).

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3.9.1.1 Level A. Unless otherwise specified herein, cleaning processes, drying procedures, preservative/preservative application, and methods of preservation (unit protection) shall conform to MIL-P-116 and table I herein. Requirements in table I are assigned by category. Methods are assigned on the basis of the type of unit protection most commonly required for a specific commodity. Unless otherwise specified (see 6.2.1), selection of the submethod, where applicable, under a particular method shall be at the option of the contractor.

TABLE I. Preservation.

Item	MIL-P-116		Intermediate pack quantity	Special requirements exceptions and reference
	Method of preservation	Type preservative		
Acid (electrolyte)	----	----	----	Use O-S-801
Adapter:				
Nonprecision (without critical surfaces):				
ferrous metal:				
unpainted	I	P-2, P-19, P-18	20	3.9.1.1.3
painted, plated or primed	III	None	20	
nonferrous	I, III, IC	P-2, P-10, P-19	20	39/
Precision (with critical surfaces):				
ferrous metal	IC	P-2, P-10, P-18	20	3.9.1.1.3
nonferrous metal	I, IC, III	P-2, P-10, P-19	20	39/
Pipe	----	----	----	See Fitting
Adjuster:				
Bearing	IC	P-2, P-10, P-18	5	3.9.1.1.3
Lash	IC	P-2, P-10, P-18	5	3.9.1.1.3
Speed	IC	P-2, P-10, P-18	5	3.9.1.1.3
Ammeter	----	----	----	Use MIL-E-17555
Arm:				
Adjuster, generator	I	P-2, P-19, P-18	10	3.9.1.1.3
Breaker	IC	P-2, P-10, P-18	20	3.9.1.1.3
Contact (brush)	IC	P-2, P-10, P-18	20	3.9.1.1.3

See footnotes at end of table.

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TABLE I. Preservation. - Continued

Item	MIL-P-116		Intermediate pack quantity	Special requirements exceptions and reference
	Method of preservation	Type preservative		
Rocker, fuel pump	IC	P-2, P-10, P-18	10	3.9.1.1.3
Rocker, valve	IC	P-2, P-10, P-18	10	3.9.1.1.3
Armature:				
Magnet	----	----	5	<u>1/</u> Use MIL-E-16298
Motor	----	----	5	<u>1/</u> Use MIL-E-16298
Relay (cut-out)	----	----	5	<u>1/</u> Use MIL-E-17555
Regulator, current and voltage	----	----	5	<u>1/</u> Use MIL-E-17555
Axle:				
Carburetor, butterfly	IC	P-2, P-10, P-18	10	3.9.1.1.3
Wheel	I	P-2, P-19, P-18	----	3.9.1.1.3
Baffle:				
Metallic:				
ferrous	I	P-2, P-19, P-18	10	3.9.1.1.3
nonferrous	I, III, IC	P-2, P-10, P-19	10	<u>39/</u>
Nonmetallic	III	None	10	
Plated, painted, or primed	III	None	10	
Ball, fuel pump	I	P-2, P-19, P-18	10	3.9.1.1.3
Ball:				
Metallic:				
ferrous	IC	P-2, P-10, P-18	20	3.9.1.1.3
nonferrous	I, III, IC	P-2, P-10, P-19	20	<u>39/</u>
Nonmetallic	III	None	20	
Band:				
Cover	I	P-2, P-19, P-18	50	3.9.1.1.3
Radio noise suppression	----	----	50	Use MIL-E-17555
Plated, painted or primed	III	None	50	

See footnotes at end of table.

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TABLE I. Preservation. - Continued

Item	MIL-P-116		Intermediate pack quantity	Special requirements exceptions and reference
	Method of preservation	Type preservative		
Barrel: cranking motor with coils	II	None	----	
Base:				
Engine:				
ferrous	I	P-2, P-19, P-18	----	3.9.1.1.3
nonferrous	I, III, IC	P-2, P-10, P-19	----	<u>39/</u>
Motor:				
ferrous	I	P-2, P-19, P-18	----	3.9.1.1.3
nonferrous	I, III, IC	P-2, P-10, P-19		<u>39/</u>
Lever control	I	P-2, P-19, P-18	----	3.9.1.1.3
Bearing:				
Anti-friction	----	----	----	Use MIL-B-197
Friction:				
ferrous	IB, IC	P-2, P-6, P-10	10	<u>2/</u>
impregnated				
nonferrous	III, IC	None	10	
Combination	IA, IB	P-2, P-19	5	<u>2/</u> , <u>3/</u>
ferrous and non-ferrous				
Half (set)				
radial, hydro-dynamic	I, IC	P-2, P-6, P-10 grade 10	5	
Belt:				
Drive, metal	----	----	----	See Chain
Fan, generator, water pump:				
leather	IC	----	----	
rubber	III	None	10	<u>4/</u>
Blade:				
Fan and governor:				
Nonmetallic	III	None	----	
Ferrous:				
painted, primed	III	None	----	
unpainted	I	P-2, P-19, P-18	----	3.9.1.1.3
Turbine	----	----	----	Use MIL-P-17286

See footnotes at end of table.

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TABLE I. Preservation. - Continued

Item	MIL-P-116		Intermediate pack quantity	Special requirements exceptions and reference
	Method of preservation	Type preservative		
Block:				
Cylinder:				
bare without moving parts	I	P-2, P-6, P-19, P-18, P-21	----	<u>5/</u> , <u>6/</u>
with moving parts	II	P-21, P-10 grade 30, P-18	----	<u>5/</u> , <u>6/</u> 3.9.1.1.3
Blower:				
Mechanical with moving parts	II	P-10 grade 30	----	<u>7/</u>
Motor driven, electrical	----	----	----	Use MIL-E-16298
Body:				
Carburetor	IC	P-10 grade 10	5	
Fuel and oil pump	IC	P-10 grade 10	5	
Governor	IC	P-10 grade 10	5	
Injector	IC	P-10 grade 10	5	
Oil filter	IC	P-10 grade 10	5	
Boot, rubber	III	None	10	<u>4/</u>
Bolt:				
Standard	----	----	50	Use PPP-H-1581 <u>2/</u> , <u>8/</u> 3.9.1.1.3
Precision with critical surfaces:				
ferrous	IB, IC	P-2, P-10 grade 30, P-18	50	3.9.1.1.3
nonferrous	I, III, IC	P-2, P-10, P-19	50	<u>39/</u>
Bond:				
Bell housing	I	P-2, P-19, P-18	25	3.9.1.1.3
Distributor to block	I	P-2, P-19, P-18	25	3.9.1.1.3
Bowl:				
Glass with gasket	III	None	10	<u>9/</u>
Metallic:				
ferrous	IC	P-2, P-10 grade 30, P-18	10	3.9.1.1.3
nonferrous	I, III, IC	P-2, P-10, P-19	10	<u>39/</u>

See footnotes at end of table.

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TABLE I. Preservation. - Continued

Item	MIL-P-116		Intermediate pack quantity	Special require- ments exceptions and reference
	Method of preservation	Type preservative		
plated, painted, or primed	III	None	10	
Brace	----	----	----	See Bracket
Bracket:				
Ferrous	I	P-2, P-19, P-18	10	3.9.1.1.3
Nonferrous	I, III, IC	P-2, P-10, P-19	10	<u>39/</u>
Plated, painted, or primed	III	None	10	
Breaker:				
Circuit	----	----	10	Use MIL-E-17555
Contact points	----	----	25	Use MIL-E-17555
Breather, crankcase	I	P-2, P-10 grade 30, P-18	10	<u>10/</u> 3.9.1.1.3
Bridge, exhaust valve	I	P-2, P-10, P-18	5	3.9.1.1.3
Brush, electrical	----	----	10	Use MIL-E-17555
Bushing:				
Bearing type:				
prelubricated				
ferrous	IC	P-2, P-10	10	
nonprelubri- cated ferrous	IC	P-2, P-10, P-18	10	3.9.1.1.3
nonferrous	I, III, IC	P-2, P-10, P-19	10	<u>39/</u>
Pipe	----	----	----	See Fittings
Butterfly, choke	IC	P-2, P-10, P-18	20	3.9.1.1.3
Cable:				
Battery:				
metallic	IC	P-11	10	<u>11/</u>
insulated	IC	P-11	10	<u>11/</u>
Flexible metal	IC	P-11	10	<u>11/</u>
Ground	I	P-2, P-19, P-18	20	<u>11/</u> 3.9.1.1.3
Ignition - wiring	IC	None	10	Coat with mate- rial conforming to MIL-V-13811
Cage:				
Bearing	IC	P-6	10	
Injector valve	IC	P-2, P-10, P-18	10	3.9.1.1.3
spring				

See footnotes at end of table.

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TABLE I. Preservation. - Continued

Item	MIL-P-116		Intermediate pack quantity	Special requirements exceptions and reference
	Method of preservation	Type preservative		
Cam:				
Metallic	IC	P-2, P-6, P-10, P-18	20	3.9.1.1.3
Nonmetallic	III, IC	None	20	<u>12/</u>
Camshaft:				
Engine - up to 25 pounds	IB, IC	P-2, P-10, P-18	----	<u>2/</u> , <u>8/</u> , <u>13/</u> 3.9.1.1.3
Engine - over 25 pounds	IC	P-2, P-10, P-18, P-19	----	<u>13/</u> 3.9.1.1.3
Cap:				
Bearing crankshaft	IB, IC,	P-2, P-10, P-18	5	3.9.1.1.3
Distributor	IC	None	5	
Metallic:				
ferrous metal	I	P-2, P-19, P-18	10	3.9.1.1.3
nonferrous metal	I, III, IC	P-2, P-10, P-19	10	<u>39/</u>
Nonmetallic	III, IC	None	10	<u>12/</u>
Carburetor assembly	II	P-10 grade 10	----	
Cartridge:				
Metallic types:				
ferrous	I	P-2, P-10 grade 30	10	
nonferrous	I, III, IC	P-2, P-10, P-19	10	<u>39/</u>
Nonmetallic types	III, IC	None	10	<u>12/</u>
Carrier, governor				
Weight	I	P-2, P-10 grade 30	10	
Case:				
Blower	IC	P-2, P-10 grade 30	----	<u>13/</u>
Gear	I	P-10 grade 30, P-19	----	<u>6/</u>
Flywheel shroud	I	P-2, P-19, P-18	----	<u>6/</u> 3.9.1.1.3
Casing: control, tachometer and speedometer	IC	P-10 grade 30	10	<u>14/</u>
Chain:				
Nonprecision	I	P-19	5	
Precision	IC	P-10 grade 30	5	

See footnotes at end of table.

MIL-S-196D

TABLE I. Preservation. - Continued

Item	MIL-P-116		Intermediate pack quantity	Special require- ments exceptions and reference
	Method of preservation	Type preservative		
Clamp:	----	----	----	See Clip
Electrical	----	----	20	Use MIL-E-17555
Hose	----	----	20	Use MIL-P-775
Cleaner:				
Air:				
dry (felt, paper)	III, IC	None	----	<u>12/</u>
oil bath	IC	P-7, P-10 grade 30	----	<u>15/</u>
Fuel or oil	----	----	----	See Strainer
Clevis	I	P-2, P-18	10	3.9.1.1.3
Cup:				
Metal:				
ferrous	I	P-2, P-19, P-18	20	3.9.1.1.3
nonferrous	I, III, IC	P-2, P-10, P-19	20	<u>39/</u>
plated, painted, or primed	III	None	20	
Nonmetal	III	None	20	
Clutch:				
Pulley (ball bear- ing on sleeve)	IC	P-2, P-10 grade 30	----	
Starter and instrument	IC	P-2, P-10 grade 30	8	
Coil	----	----	----	Use MIL-E-17555
Collar:				
Ferrous:				
precision/criti- cal surfaces	IC	P-2, P-10 P-18 grade 30	20	3.9.1.1.3
nonprecision	I	P-2, P-19, P-18	20	3.9.1.1.3
Nonferrous	I, III, IC	P-2, P-10, P-19	20	<u>39/</u>
Painted, plated, or primed	III	None	20	
Commutator	----	----	----	Use MIL-E-16298
Compressor:				
Air engine assembly	I (modified)	P-19, P-10 grade 30	----	<u>16/</u>
Condenser, electrical	----	----	----	Use MIL-E-17555
Conduit	----	----	----	Use MIL-E-17555
Cone, bearing	IC	P-6, P-11	10	
Cone and roller	----	----	----	Use MIL-B-197

See footnotes at end of table.

MIL-S-196D

TABLE I. Preservation. - Continued

Item	MIL-P-116		Intermediate pack quantity	Special requirements exceptions and reference
	Method of preservation	Type preservative		
Connector:				
Electrical with contacts	----	----	30	Use MIL-E-17555
Nonelectrical	I	P-2, P-19, P-18	30	3.9.1.1.3
Contact, electrical	----	----	30	Use MIL-E-17555
Control: injector, governor, carburetor choke	IC	P-7, P-10 grade 30	5	
Cooler:				
Oil transmission (fluid drive)	I (modified)	P-10 grade 30, P-19	5	<u>16/</u>
Fuel	I	P-10 grade 10, P-19	5	<u>16/</u>
Core:				
Heat exchanger	I (modified)	P-7, P-10 grade 30, P-19, P-21	----	<u>17/</u>
Radiator (composite and non-ferrous)	I (modified)	P-19, P-21	----	<u>17/</u>
Oil cooler	I (modified)	P-7, P-10 grade 30, P-19, P-21	----	<u>17/</u>
Counterweight:				
Clutch pulley	I	P-2, P-19, P-18	----	3.9.1.1.3
Governor	I	P-2, P-19, P-18	5	3.9.1.1.3
Crankshaft	I	P-2, P-19, P-18	----	3.9.1.1.3
Coupling:				
Electrical	----	----	30	Use MIL-E-17555
Pipe or tube	----	----	30	Use MIL-P-775
Cover:				
Metallic:				
ferrous	I	P-2, P-19, P-18	5	3.9.1.1.3
nonferrous	I, III, IC	P-2, P-10 P-19	5	<u>39/</u>
ferrous with non-metallic parts or elements	IC	P-10 grade 30	5	<u>18/</u>

See footnotes at end of table.

MIL-S-196D

TABLE I. Preservation. - Continued

Item	MIL-P-116		Intermediate pack quantity	Special require- ments exceptions and reference
	Method of preservation	Type preservative		
nonferrous with nonmetallic parts or elements	IC	----	5	
Nonmetallic	II, IC	----	5	<u>12/</u>
Crank:				
Hand	I	P-2, P-19, P-18	5	3.9.1.1.3
Bell	I	P-2, P-19, P-18	5	3.9.1.1.3
Governor	I	P-2, P-19, P-18	10	3.9.1.1.3
Crankcase:				
Assembly	I	P-2, P-19, P-18	----	3.9.1.1.3
(less block)				
Assembly with block	----	----	----	See Block
Crankshaft:				
With or without gear or bearing up to 25 pounds	IB, IC	P-6, P-7, P-10	----	<u>2/</u> , <u>19/</u>
With or without gear or bearing over 25 pounds	IC (modified)	P-7, P-10 grade 30	----	<u>13/</u>
Cup:				
Grease	IC	P-2, P-10 grade 30	10	
Oil (soak type)	IC	P-2, P-10 grade 30	10	
Thrust, governor	IC	P-2, P-10 grade 30	10	
Cylinder:				
Engine (case integral with crankcase small oil drain holes)	IC	P-2, P-10 grade 30	----	
Bearing inserts - straight	IC	P-2, P-10 grade 30	5	
Damper:				
Crankshaft vibration	I	P-18, P-19	5	3.9.1.1.3
Fluid pressure: ferrous	I	P-2, P-18, P-19	----	3.9.1.1.3

See footnotes at end of table.

MIL-S-196D

TABLE I. Preservation. - Continued

Item	MIL-P-116		Intermediate pack quantity	Special requirements exceptions and reference
	Method of preservation	Type preservative		
nonferrous	I, III, IC	P-2, P-10, P-19	----	<u>12/</u> , <u>39/</u>
Deflector:				
Injector:				
ferrous	I	P-2, P-19, P-18	5	3.9.1.1.3
nonferrous	I, III, IC	P-2, P-10, P-19	5	<u>39/</u>
Device, idling	IC	P-7, P-10 grade 30	20	
Diaphragm, fuel pump	IC	None	10	
Diffuser, crankcase	I	P-19, P-18	----	3.9.1.1.3
Disc:				
Clutch:				
with hub and non-metallic facings	IC	----	----	<u>20/</u>
without hub and facings	I	P-18, P-19	----	3.9.1.1.3
Leather, fiber	III, IC	None	5	<u>12/</u>
Distributor, assembly	II	None	----	
Dog:				
Clutch	I	P-18, P-19	10	3.9.1.1.3
Starter	I	P-18, P-19	10	3.9.1.1.3
Dowel:				
Metal	I	P-2, P-19, P-18	20	3.9.1.1.3
Nonmetal	III	None	20	
Drive:				
Starter	IC	P-10 grade 30	----	
Tachometer	IC	P-10 grade 30	5	
Elbow	----	----	----	See Fitting
Electrical items: not otherwise indicated herein	----	----	----	Use MIL-E-17555
Electrode, magneto	IC	None	10	
Electrical machines	----	----	----	Use MIL-E-17555
Element	----	----	----	See Cartridge
End, control throttle rod	IC (modified)	P-2, P-10 grade 30	10	<u>21/</u>
Engine assembly, with or without mounted accessories	----	----	----	Use MIL-E-10062

See footnotes at end of table.

MIL-S-196D

TABLE I. Preservation. - Continued

Item	MIL-P-116		Intermediate pack quantity	Special requirements exceptions and reference
	Method of preservation	Type preservative		
Expander, piston	I, IC	P-2, P-10 grade 30, P-19, P-18	20	<u>22/</u> 3.9.1.1.3
Extension: underpan clutch and fly-wheel housing	I	P-2, P-19, P-18	----	3.9.1.1.3
Facing: clutch, molded or woven	IC	----	----	<u>23/</u>
Fan:				
Engine	III, I	P-2, P-19, P-18	5	<u>24/</u> , <u>25/</u> 3.9.1.1.3
Generator	III, I	P-2, P-19, P-18	5	<u>25/</u> 3.9.1.1.3
Felt: oil seal	IC	None	30	
Field and frame	----	----	10	Use MIL-E-16298
Filler: oil, crankcase	I	P-2, P-19, P-18	----	3.9.1.1.3
Filter:				
Cleaner, air	----	----	20	See Cleaner, dry felt, paper
Fuel and oil	----	----	20	See Cartridge
Magneto	----	----	20	Use MIL-E-17555
Distributor	----	----	20	Use MIL-E-17555
Primary circuit	----	----	20	Use MIL-E-17555
Radio noise suppression	----	----	20	Use MIL-E-17555
Fitting:				
Pipe nipples, elbows, plugs, unions, tees, caps, etc.:				
ferrous metal	I	P-2, P-19, P-18	25	3.9.1.1.3
nonferrous metal	I, III, IC	P-2, P-10, P-19	25	<u>39/</u>
nonmetallic	III	None	25	
Lubrication	IC	P-7, P-10 grade 30	25	
Flange	----	----	5	Use MIL-V-3
Flinger:				
Ferrous	I	P-2, P-19, P-18	----	3.9.1.1.3
Nonferrous	I, III, IC	P-2, P-10, P-19	----	<u>39/</u>
Nonmetallic	III, IC	None	----	<u>12/</u>

See footnotes at end of table.

MIL-S-196D

TABLE I. Preservation. - Continued

Item	MIL-P-116		Intermediate pack quantity	Special requirements exceptions and reference
	Method of preservation	Type preservative		
Float:				
Metallic:				
ferrous	IC	P-2, P-10 grade 30	20	
nonferrous	I, III, IC	P-2, P-10, P-19	20	<u>39/</u>
Nonmetallic	III, IC	None	20	<u>12/</u>
Flywheel: except hydromatic, with or without ring gear assembly	I	P-2, P-19	----	See MIL-E-16298 See Guide
Magnet	----	----	----	
Follower:	----	----	----	
Cam	IC	P-2, P-10 grade 30	5	
Injector	IC	P-2, P-10 grade 30	5	
Fork:				
Fuel pump drive	I	P-2, P-19, P-18	10	3.9.1.1.3
Governor shaft	I	P-2, P-19, P-18	10	3.9.1.1.3
Frame:				
Generator	I	P-2, P-19	5	
Motor	I	P-2, P-19	5	
Panel, instrument painted	III	None	5	
unpainted	I	P-2, P-19	5	
Radiator	I	P-2, P-19	----	
Gauge:				
Electrical	----	----	10	Use MIL-E-17555
Nonelectrical (fuel, oil, temperature):				
open	II	----	10	
hermetically sealed	III	None	10	
Oil dipstick	I	P-2, P-19, P-18	10	3.9.1.1.3
Gasket:				
Ferrous metal and composition	IC	P-7, P-10 grade 30	20	<u>25/</u>
Nonferrous metal and composition	IC	None	20	<u>25/</u>

See footnotes at end of table.

MIL-S-196D

TABLE I. Preservation. - Continued

Item	MIL-P-116		Intermediate pack quantity	Special requirements exceptions and reference
	Method of preservation	Type preservative		
Ferrous metal	IC	P-2, P-10 grade 30	20	<u>25/</u>
Nonferrous metal	I, III, IC	P-2, P-10, P-19	20	<u>25/</u> , <u>39/</u>
Metal and asbestos	IC	P-19	20	<u>25/</u> 3.3.3
Nonmetal (cork, fiber, felt, leather, paper, rubber, teflon or neoprene, etc.)	IC	None	20	<u>25/</u> 3.3.3
Gear:				
Ferrous metal	IB, IC	P-2, P-10 grade 30, P-18	5	<u>2/</u> 3.9.1.1.3
Nonferrous metal	I, III, IC	P-2, P-10, P-19	5	<u>39/</u>
Nonmetallic	III	None	5	
Assembly with housing	IC	P-10 grade 10	----	<u>26/</u>
Assembly - hydraulic marine	IC	P-15	----	
Gear box assembly	I	P-2, P-6, P-19	----	<u>6/</u>
Generator	----	----	----	Use MIL-E-16298
Gland:				
Pump:				
ferrous	IC	P-2, P-10 grade 30, P-18	20	3.9.1.1.3
nonferrous	I, III, IC	P-2, P-10, P-19	20	<u>39/</u>
Glass: dual, tube, etc.	III	None	20	<u>27/</u>
Governor assembly	II	----	----	
Grommets, rubber	IC	None	100	<u>4/</u>
Guide:				
Air or baffle (flat or formed):				
ferrous metal	I	P-2, P-19, P-18	10	3.9.1.1.3
nonferrous metal	I, III, IC	P-2, P-10, P-19	10	<u>39/</u>
plated, painted, or primed	III	None	10	

See footnotes at end of table.

MIL-S-196D

TABLE I. Preservation. - Continued

Item	MIL-P-116		Intermediate pack quantity	Special requirements exceptions and reference
	Method of preservation	Type preservative		
Cam follower	IC	P-10 grade 30	10	
Valve stem	IC	P-10 grade 30	10	
Hair: air cleaner, fuel or vacuum pump	IC	----	30	
Handle:				
Carrying	I	P-2, P-19, P-18	30	3.9.1.1.3
Hand crank	I	P-2, P-19, P-18	30	3.9.1.1.3
Hardware: bolts, nuts, rivets, etc.	----	----	----	Use PPP-H-1581
Hanger	----	----	----	See Bracket
Harness, wiring	----	----	----	Use MIL-C-55442
Head:				
Cylinder L-type	I (modified)	P-2, P-19, P-21	----	<u>17/</u> , <u>28/</u>
Valve in head assembly with or without valves:				
up to 40 pounds	II	P-10 grade 30	----	<u>28/</u>
over 40 pounds	II	P-10 grade 30	----	<u>28/</u>
Filter	I	P-2, P-19	10	<u>6/</u>
Generator or starter	I	P-2, P-19	10	<u>6/</u>
Hinge:				
Metallic:				
ferrous	I	P-2, P-19, P-18	5	3.9.1.1.3
nonferrous	I, III, IC	P-2, P-10, P-19	5	<u>39/</u>
plated, painted, or primed	III	None	5	
Nonmetallic	IC	None	5	<u>12/</u>
Holder, brush	----	----	30	Use MIL-E-17555
Hose and fittings	----	----	----	Use MIL-P-775
Housing:				
Clutch	I	P-2, P-19	----	<u>6/</u>
Flywheel	I	P-2, P-19	----	<u>6/</u>
Instrument	I	P-2, P-19	10	<u>6/</u>
Motor	I	P-2, P-19	5	<u>6/</u>
Pump	----	----	----	Use MIL-P-16789
Oil filter bypass valve	IC	P-10 grade 30	5	
Thermostat	I	P-2, P-19	10	<u>6/</u>

See footnotes at end of table.

MIL-S-196D

TABLE I. Preservation. - Continued

Item	MIL-P-116		Intermediate pack quantity	Special require- ments exceptions and reference
	Method of preservation	Type preservative		
Reduction gear	I	P-2, P-19	----	<u>6/</u>
Hub:				
Blower drive gear	IC	P-2, P-10 grade 30	10	
Idler gear	IC	P-2, P-10 grade 30	10	
Sprocket	I	P-2, P-19	10	<u>6/</u>
Water pump	----	----	10	Use MIL-P-16789
Impeller:				
Ferrous	I	P-2, P-19, P-18	10	3.9.1.1.3
Nonferrous	I, III, IC	P-2, P-10, P-19	10	<u>39/</u>
Pump	----	----	----	Use MIL-P-16789
Indicator: engine oil level, dip- stick	----	----	----	See Gauge
Injector, fuel	IC	P-10 grade 30	6	<u>29/</u>
Insert:				
Cylinder liner	----	----	----	See Liner
Oil pan drain	I	P-2, P-18, P-19	30	3.9.1.1.3
Valve seat	IC	P-2, P-18, P-19	30	3.9.1.1.3
Isolator	IC	None	5	
Insulator:				
Cylinder sleeve	III	None	30	
Electrical	----	----	30	Use MIL-E-17555
Fiber	III, IC	None	30	<u>12/</u>
Jaw starter	IC	P-2, P-10 grade 30	10	
Jet, carburetor	IC	P-10 grade 30	50	
Key:				
Valve stem	IC	P-10 grade 30, P-18	100	3.9.1.1.3
Woodruff and other	----	----	----	Use PPP-H-1581
Kit (and sets):	----	----	----	Each individual
Carburetor repair				part within the
Engine overhaul - gasket				kit shall be
Blower end plate cover				unit packaged
Blower - installa- tion				and identified
Blower - repair				as specified
				within this
				table. Kits
				or sets shall

See footnotes at end of table.

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TABLE I. Preservation. - Continued

Item	MIL-P-116		Intermediate pack quantity	Special requirements exceptions and reference
	Method of preservation	Type preservative		
Cylinder				be packaged as a complete unit in plastic molded trays or foam will be acceptable with proper identification supplied. See 3.9.1.1.5
Cylinder head				
overhaul gasket				
Oil pan to block gasket				
Fuel pump overhaul				
Fresh water pump reconditioning				
Fresh water pump seal replacement				
Raw water pump seal and impeller, replacement				
Forward clutch piston seal				
Injector service Valve				
Shim				
Latch, air inlet valve	I	P-2, P-19, P-18	10	
Lead	----	----	10	
Lever: carburetor, choke, control governor, throttle, and fuel shutoff	I	P-2, P-19, P-18	----	
Lever assembly, with gearings	IC	P-11, P-2	6	
Liner, cylinder assembly	IC	----	----	<u>17/</u>
Lines:				
Metallic:				
ferrous	I	P-10 grade 30 or 50	10	<u>30/</u>
nonferrous	I, III, IC	P-2, P-10, P-19	10	<u>30/</u> , <u>39/</u>
Nonmetallic	IC	None	10	<u>30/</u>
Lining:				
Clutch and brake, molded and woven	IC	None	10	3.3.3.2
Asbestos composition	III	None	10	3.3.3.2
Link:				
Carburetor	I	P-2, P-10 grade 30, P-18	20	3.9.1.1.3

See footnotes at end of table.

MIL-S-196D

TABLE I. Preservation. - Continued

Item	MIL-P-116		Intermediate pack quantity	Special requirements exceptions and reference
	Method of preservation	Type preservative		
Accelerator	I	P-2, P-10 grade 30, P-18	20	3.9.1.1.3
Governor	I	P-2, P-10 grade 30, P-18	20	3.9.1.1.3
Throttle	I	P-2, P-10 grade 30, P-18	20	3.9.1.1.3
Injector control	IC	P-2, P-10 grade 30, P-18	20	3.9.1.1.3
Lock:				
Ignition	IC	P-10 grade 30	30	<u>31/</u>
Bearing nut retainer	IC	P-10 grade 30, P-18	30	3.9.1.1.3
Piston pin	IC	P-10 grade 30, P-18	30	3.9.1.1.3
Locknut, lock washer, etc.	----	----	10	Use PPP-H-1581
Lubricator, starter	IC	P-2, P-10 grade 30	30	
Lug, electrical	----	----	----	Use MIL-E-17555
Magneto	----	----	----	Use MIL-E-16298
Manifold:				
Intake and exhaust	I	P-10 grade 30, P-19	10	<u>6/</u> , <u>32/</u>
Heat exchange	I	P-10 grade 30, P-19, P-21	----	<u>17/</u>
Motors:				
Electric	----	----	----	Use MIL-E-16298
Hydraulic	----	----	----	Use MIL-P-16789
Motor assembly, starting	----	----	----	Use MIL-E-16298
Mounting:				
Metal	----	----	----	See Bracket
Rubber	III	None	10	<u>4/</u>
Muffler assembly	I	P-10 grade 30, P-19, P-21	----	<u>17/</u>
Neck expansion tank filler	I	P-2, P-19, P-18	10	<u>6/</u> 3.9.1.1.3
Nipple:				
Hose	----	----	10	Use MIL-P-775
Pipe	----	----	10	Use MIL-P-775
Spark plug cable	III	None	50	<u>4/</u>

See footnotes at end of table.

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TABLE I. Preservation. - Continued

Item	MIL-P-116		Intermediate pack quantity	Special requirements exceptions and reference
	Method of preservation	Type preservative		
Nozzle:				
Carburetor	IC	P-10 grade 30	20	
Fuel injector	IC	P-10 grade 30	20	
Nut:				
Standard (common hardware)	----	----	----	Use PPP-H-1581
Precision:				
ferrous metal	IC	P-2, P-10 grade 30, P-18	50	3.9.1.1.3
nonferrous metal	I, III, IC	P-2, P-10, P-19	50	<u>39/</u>
Oiler:				
Distributor	IC	P-10 grade 10	20	
Motor (starter and generator)	IC	P-10 grade 10	20	
Orifice: oil, engine cylinder	IC	P-10 grade 30	20	
Packing:				
Leather	III, IC	None	20	<u>12/</u>
O-ring	----	----	30	Use MIL-P-4861
Rubber	IC	None	30	<u>4/</u>
Fabric	IC	None	30	<u>12/</u>
Graphite treated	IC	None	30	
Pad:				
Breather:				
metallic	IC	P-10 grade 30	5	
nonmetallic	III	None	5	
Pan:				
Oil	I	P-18, P-19	----	3.9.1.1.3
Oil assembly	----	----	----	See Cover
Oil with oil pressure lines	I	P-10 grade 30, P-19	----	<u>6/</u> , <u>33/</u>
Pedal, starter	I	P-2, P-19, P-18	10	3.9.1.1.3
Pin:				
Nonprecision:				
ferrous metal	I, IB	P-2, P-19, P-18	30	<u>2/</u> 3.9.1.1.3
nonferrous metal	I, III, IC	P-2, P-10, P-19	----	<u>39/</u>

See footnotes at end of table.

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TABLE I. Preservation. - Continued

Item	MIL-P-116		Intermediate pack quantity	Special requirements exceptions and reference
	Method of preservation	Type preservative		
Precision with critical surfaces: ferrous metal	IC	P-2, P-10 grade 30, P-18	30	3.9.1.1.3
nonferrous metal	I, III, IC	P-2, P-10, P-19	30	<u>39/</u>
Piston	IB, IC	P-10 grade 30, P-18	6	<u>2/</u> 3.9.1.1.3
Pinion	----	----	----	See Gear
Pipe:				
Air cleaner	I	P-2, P-19	10	
Exhaust	----	----	----	See Muffler
Breather	I	P-2, P-10 grade 30, P-19	10	<u>34/</u>
Filler	I	P-2, P-10 grade 30, P-19	10	<u>34/</u>
Drain	I	P-2, P-19	10	<u>6/</u>
Crankcase outlet	I	P-2, P-19	10	<u>6/</u>
Piston:				
Engine with or without pin and rings	IC	P-2, P-10 grade 30	6	
Forward clutch	IC	P-18	5	3.9.1.1.3
Piston rings	IC	P-18	6	3.9.1.1.3
Plate:				
Breaker or magneto	----	----	----	Use MIL-E-17555
Clutch	----	----	----	See Disc
Engine support	----	----	----	See Bracket
Governor support	I	P-2, P-19	10	
Starter and generator	II	P-2, P-19	10	
Oil seal	IC	P-2, P-10 grade 30	10	
Thrust, camshaft	IC	P-2, P-10 grade 30	10	
Name and date (identification)	IC	None	20	<u>35/</u>
Clutch pulley	IC	P-2, P-6	10	
Plug:				
Cam shaft	IC	P-2, P-10 grade 30	10	

See footnotes at end of table.

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TABLE I. Preservation. - Continued

Item	MIL-P-116		Intermediate pack quantity	Special requirements exceptions and reference
	Method of preservation	Type preservative		
Expansion	I	P-2, P-10 grade 30	10	
Pipe	----	----	----	See Fitting
Spark	IC	None	8	
Plunger:				
Fuel pump and governor	IC	P-2, P-10 grade 30	20	
Injector with bushing assy	IC	P-10 grade 30	10	
Oil pump with or without check valve	IC	P-2, P-10 grade 30	20	
Point set: distributor	----	----	----	Use MIL-E-17555
Pole:				
Field, coil	----	----	----	Use MIL-E-16298
Generator	----	----	----	Use MIL-E-16298
Poppet, selection valve	IC	P-2, P-10 grade 30	10	
Post, terminal	----	----	30	Use MIL-E-17555
Power take off, transmission	----	----	----	See Gear
Primer, engine	IC	P-2, P-10 grade 30	20	
Pulley	I	P-2, P-19	10	<u>36/</u>
Pulsator, fuel pump	IC	----	50	
Pump:				
Fuel and oil with nonmetallic parts	II	----	----	MIL-P-16789
Fuel and oil without nonmetallic parts	IC	P-10 grade 30	----	<u>16/</u>
Water with or without metallic parts	II	----	----	MIL-P-16789
Quadrant, carburetor	IC	P-2, P-10 grade 30	50	
Quill:				
Camshaft	IC	P-2, P-7	5	
Fan drive	IC	P-2, P-7	5	
Water pump drive	IC	P-2, P-7	5	
Race, bearing	----	----	----	Use MIL-B-197
Rack:				
Injection assembly	IC	P-10 grade 30	10	
Noncritical	I	P-2, P-19	10	

See footnotes at end of table.

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TABLE I. Preservation. - Continued

Item	MIL-P-116		Intermediate pack quantity	Special require- ments exceptions and reference
	Method of preservation	Type preservative		
Radiator assembly, composite and non- ferrous	I	P-19, P-21	----	<u>17/</u> , <u>28/</u>
Receptacle:				
Electrical	----	----	20	Use MIL-E-17555
Speedometer	IC	P-7, P-10 grade 30	10	
Tachometer	IC	P-7, P-10 grade 30	10	
Regulator:				
Oil pressure	IC	P-10 grade 30	5	
Voltage	----	----	----	Use MIL-E-17555
Relay: electrical all types	----	----	----	Use MIL-E-17555
Release, compres- sion assembly	I	P-2, P-19	10	
Reservoir, oil, air cleaner	I	P-2, P-19	10	<u>37/</u>
Retainer:				
Grease or oil seal	I	P-2, P-19	50	
Valve spring	I	P-2, P-19	50	
Bearing	IC	P-2	10	See MIL-B-197
Rheostat, elec- trical	----	----	----	Use MIL-E-17555
Ring:				
Locking:				
20 gauge, 1-inch diameter or less	IC	P-10 grade 30	20	
19 gauge, 1-inch diameter or greater	IC	P-10 grade 30	20	
Riser, governor	IC	P-2, P-10 grade 30	10	
Rivet	----	----	----	Use PPP-H-1581
Rod:				
Connecting	IB, IC	P-2, P-10 grade 30	5	<u>2/</u>
Hollow or drilled	IC	P-7, P-10 grade 30	5	
Solid:				
ferrous metal	I	P-2, P-18, P-19	20	3.9.1.1.3
nonferrous metal	I, III, IC	P-2, P-10, P-19	20	<u>39/</u>
Roller set, cam follower	IC	P-2, P-10 grade 30		

See footnotes at end of table.

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TABLE I. Preservation. - Continued

Item	MIL-P-116		Intermediate pack quantity	Special requirements exceptions and reference
	Method of preservation	Type preservative		
Rope:				
Starting, flexible metal	I	P-2, P-19	20	
Cord or composition (with or without handle)	III	None	20	
Rotor:				
Distributor	----	----	20	Use MIL-E-17555
Blower	IC	P-10 grade 30	5	
Saddle, engine support	I	P-2, P-19	----	
Screen:				
Fuel and oil pump fuel filter and blower:				
ferrous	IC	P-10 grade 10	20	
nonferrous	I, III, IC	P-2, P-10, P-19	20	<u>39/</u>
Screw:				
Standard	----	----	----	Use PPP-H-1581
Precision:				
ferrous metal	IC	P-2, P-19, P-18	25	3.9.1.1.3
nonferrous metal	I, III, IC	P-2, P-10, P-19	25	<u>39/</u>
Seal:				
Oil or grease:				
metallic	IC	P-2, P-10	30	
nonmetallic	IC	None	----	<u>4/</u>
Seat:				
Fuel filter	IC	P-2, P-10	30	
Valve and spring	IC	P-2, P-10	30	
Sector, starter	IC	None	----	
Set	----	----	----	See Kit See Rod
Shaft	----	----	----	
Shell:				
Crankshaft main bearing	IC	P-2, P-10 grade 30	----	
Radiator	I	P-2, P-19	----	<u>6/</u>
Shield:				
Fuel pump	I	P-2, P-19	20	
Distributor, radio noise suppression	I	P-2, P-19	20	
Heat carburetor	I	P-2, P-19	20	
Oil spray	I	P-2, P-19	20	
Spark plug	I	P-2, P-19	20	

See footnotes at end of table.

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TABLE I. Preservation. - Continued

Item	MIL-P-116		Intermediate pack quantity	Special require- ments exceptions and reference
	Method of preservation	Type preservative		
Shim:				
Metallic				
ferrous	IC	P-2, P-10 grade 30, P-18	50	<u>38</u> / 3.9.1.1.3
nonferrous	I, III, IC	P-2, P-10, P-19	50	<u>38</u> /, <u>39</u> /
Nonmetallic	III	None	50	<u>38</u> / 3.3.3
Shoe, magneto	I	P-2, P-19	20	
Shroud, flywheel	I	P-2, P-19	----	
Shunt, electrical	----	----	----	Use MIL-E-17555
Silencer	----	----	----	See Muffler
Sleeve:				
Nonprecision, metal				
ferrous	I, IC	P-2, P-19, P-18	20	3.9.1.1.3
nonferrous	I, III, IC	P-2, P-10, P-19	20	<u>39</u> /
Precision, metal:				
ferrous	IC	P-2, P-19, P-18	20	<u>6</u> / 3.9.1.1.3
nonferrous	I, III, IC	P-2, P-10, P-19	20	<u>39</u> /
Cylinder	----	----	----	See Liner
Slinger, water pump	I	P-2, P-19	10	
Snap	----	----	----	See Ring
Solenoid:				
Electrical	----	----	----	Use MIL-E-17555
Mechanical	IC	P-2, P-10 grade 30	5	
Spacer:				
Metallic:				
ferrous	IB, IC	P-2, P-10, P-18	10	<u>2</u> /
nonferrous	I, III, IC	P-2, P-10, P-19	10	<u>39</u> /
Nonmetallic	IC	None	10	<u>4</u> /
Spindle	----	----	----	See Rod
Spring:				
Ferrous metal:				
20 gauge wire or over	IC	P-2, P-10 grade 30, P-18	20	3.9.1.1.3

See footnotes at end of table.

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TABLE I. Preservation. - Continued

Item	MIL-P-116		Intermediate pack quantity	Special requirements exceptions and reference
	Method of preservation	Type preservative		
19 gauge wire or less	I, IC	P-2, P-19, P-18	20	3.9.1.1.3
Flat (packing)	IC	None	20	
Garter (packing)	IC	None	20	
Coil	I, IC	P-2, P-19, P-18	10	3.9.1.1.3
Sprocket	----	----	----	See Gear
Stamping	----	----	----	See Shim
Starter:				
Assembly	----	----	----	Use MIL-E-16298
Foot or hand lever	I	P-2, P-19, P-18	5	3.9.1.1.3
Stem:				
Air cleaner and carburetor	I	P-2, P-19, P-18	20	3.9.1.1.3
Valve	IB, IC	P-2, P-10 grade 30, P-18	20	<u>2/</u> 3.9.1.1.3
Stick, dip	----	----	----	See Gauge
Stop, throttle end	IC	P-2, P-10 grade 30	----	
Strainer:				
Ferrous	I	P-2, P-10 grade 30	10	
Nonferrous	I, III, IC	P-2, P-10, P-19	10	<u>39/</u>
Strap:				
Adjusting, generator	I	P-2, P-19	20	
Air cleaner, fuel tank	I	P-2, P-19	20	
Stud	----	----	----	See Bolt
Support	----	----	----	See Bracket
Suppressor, spark	----	----	----	Use MIL-E-17555
Switch, electrical	----	----	----	Use MIL-E-17555
Swivel	I	P-2, P-19	20	
Tachometer	----	----	----	Use MIL-E-17555
Tank:				
Fuel:				
lined	I	P-2, P-19	----	<u>6/</u> , <u>28/</u>
unlined	I	P-2, P-10, P-19	----	<u>16/</u> , <u>28/</u>
Pressure	I	P-2, P-19	----	<u>6/</u> , <u>28/</u>
Tappet, valve	IB, IC	P-2, P-10 grade 30	20	<u>2/</u>

See footnotes at end of table.

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TABLE I. Preservation. - Continued

Item	MIL-P-116		Intermediate pack quantity	Special require- ments exceptions and reference
	Method of preservation	Type preservative		
Tee	----	----	----	See Fitting
Terminal	----	----	----	Use MIL-E-17555
Thermostat:				
Electrical	----	----	----	Use MIL-E-17555
Mechanical	IC	P-2, P-10 grade 30	10	
Throttle, butterfly	I	P-2, P-19	10	
Thrower	I	P-2, P-19	10	
Timer:				
Assembly:				
electrical	----	----	10	Use MIL-E-17555
mechanical	II	None	10	
Tip assembly,	IC	P-10 grade 10	5	
injector spray				
Tools	----	----	----	Use PPP-P-40
Tool kits and sets	----	----	----	Use MIL-T-45542
Tooth: spring,	I	P-2, P-19	10	
starter				
Trough	I	P-2, P-19	----	
Tube and tubing:				
Metallic	----	----	----	See Line
Nonmetallic	----	----	----	See Hose
Underpan, flywheel	I	P-19	----	
Union	----	----	----	See Fitting
Unit:				
Drive	II	----	5	
Sending	IC	P-2, P-10 grade 30	20	
Voltage regulator	II	----	5	See MIL-E-17555
Universal joint	IC	----	5	
Valve:				
Bakelite	IC	None	30	
Butterfly	IC	P-2, P-10 grade 30	30	
Carburetor, float or fuel	IC	P-2, P-10 grade 30	30	
Check, drain and pipe:				
ferrous metal	IC	P-2, P-10 grade 30	10	See MIL-V-3
nonferrous metal	I, III, IC	P-2, P-10, P-19	10	39/
Intake and exhaust	IB, IC	P-2, P-10	20	2/
Solenoid	----	----	----	See Solenoid

See footnotes at end of table.

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TABLE I. Preservation. - Continued

Item	MIL P-116		Intermediate pack quantity	Special requirements exceptions and reference
	Method of preservation	Type preservative		
Vane:				
Diffuser	I, IC, IB	P-2, P-10 grade 30	20	<u>2/</u>
Fuel and water pump	I	P-2, P-19	50	
Vaporizer, fuel assembly	IC	P-2, P-10 grade 30	10	
Vent: well, carburetor	IC	P-10 grade 30	30	
Venturi, carburetor	IC	P-10 grade 30	20	
Washer:				
Nonmetallize - all sizes	IC	None	50	
Standard	----	----	----	Use PPP-H-1581
Precision:				
ferrous metal	IC	P-10 grade 30	50	
nonferrous metal	I, III, IC	P-2, P-10, P-19	50	<u>39/</u>
Weight:				
Carburetor and check valve	IC	P-10 grade 30	30	
Distributor	IC	None	30	
Governor	IC	P-10 grade 30	30	
Well, metering carburetor	IC	P-2, P-10 grade 30	50	
Wick:				
Distributor	IC	None	50	
Felt - starter	IC	None	50	
Winding	----	----	----	See Coil
Wire, insulated	----	----	----	Use MIL-C-12000
Worm:				
Gear	----	----	----	See Gear
Crankshaft	----	----	----	See Gear
Yoke:				
Clutch	IC	P-2, P-19	10	
Filter (fuel)	IC	P-2	30	

1/ Intermediate pack not required for parts preserved by submethods IIb, IIc, and IIc.

2/ Contact preservative shall be applied to items preserved by method IB-2.

3/ Do not use method IB-1 for bronze-backed babbit bearings.

4/ Rubber products, when packaged in multiples, shall be dusted with talc, talcum, or soapstone powder (see 3.3.3.3).

5/ Fog or flush water passages with P-21. Fill stud orifices with P-6. Coat unpainted external surfaces with P-19. Coat external machine surfaces with P-2. Seal openings (see 3.7).

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- 6/ P-19 exterior surfaces only.
- 7/ Apply preservative to interior and unpainted exterior surfaces.
- 8/ Method IB-1 not to be used on parts with keyslots, oil holes, or bearings.
- 9/ Preserve gasket method IC prior to preserving unit method III.
- 10/ Coat interior surfaces.
- 11/ Apply preservatives on connectors only.
- 12/ Method III if fungus-proofed.
- 13/ Brush bearings and critical surfaces with P-10 and wrap with grade A, class 2 barrier material conforming to MIL-B-121. Brush noncritical surfaces with P-19.
- 14/ Coil leads or cables to a minimum, safe diameter.
- 15/ Preservative on unpainted ferrous surfaces only.
- 16/ Clean prior to assembly. Fog interior surfaces with P-10, grade 30. Seal openings (see 3.7). Coat exterior bare surfaces with P-19.
- 17/ Apply P-21 to water passages. Apply P-7 or P-10, grade 30 to oil passages. Seal openings (3.7) to prevent entrances of dirt and moisture. Coat unpainted exterior surfaces with P-19.
- 18/ Remove excess preservative.
- 19/ Use P-6 preservative on part when using method IB-2.
- 20/ Clean metal surfaces and apply lacquer-resisting synthetic primer conforming to TT-P-664 to metal surfaces. Coating on nonmetallic surfaces shall be held to a minimum.
- 21/ Clean prior to assembly. Wrap critical surfaces with material conforming to MIL-B-121, grade A.
- 22/ Method I shall only be used with P-19.
- 23/ Use a preliminary wrap conforming to MIL-B-121, grade A barrier material.
- 24/ Method III applies if painted or primed, or nonmetallic, no preservative.
- 25/ Wipe preservative on bare metal surfaces. Use fiberboard stiffeners to prevent deformation.
- 26/ Flush with preservative.
- 27/ Unit pack should be paperboard or fiberboard boxes with internal cushioning or suitable device (blocking) to prevent breakage of glass.
- 28/ Individually pack in fiberboard, wood or plywood unit containers, based on item weight and limits on use.
- 29/ Clean prior to assembly. Flush interior and coat exterior with P-10.
- 30/ Seal ends of lines with plastic caps or pressure-sensitive tape (see 3.7).
- 31/ Apply preservative by wiping. No preservative to be applied to electrical controls or contacts.
- 32/ Fog manifold intake with P-10; coat exterior surfaces with P-19.
- 33/ Coat interior of lines with P-10, grade 30. Close openings with material conforming to MIL-B-121 barrier material and pressure-sensitive tape or plastic caps.
- 34/ Coat interior with P-10, grade 30.
- 35/ If unpainted metal, coat with varnish conforming to MIL-V-13811.
- 36/ Lacquer-resisting primer conforming to TT-P-664 may be used in lieu of P-2 or P-19.
- 37/ Preserve external surfaces only. Seal all openings (see 3.7).
- 38/ Stiffeners of paperboard or fiberboard shall be used to provide added physical protection.

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39/ Preservative shall be applied to all corrosion-resistant steel with a content of less than 18 percent chromium and 8 percent nickel and all non-anodized aluminum and untreated magnesium items. Other nonferrous metals which may be affected by extended periods of exposure to salt air or high humidity shall be packaged submethod IC-I. All other nonferrous metals shall be packaged method III.

3.9.1.1.1 Cushioning and wrapping materials. Cushioning or wrapping material shall be provided, as required, to prevent damage to the item as determined by the criteria conforming to MIL-P-116, and to prevent puncture or tearing of the barrier materials used in packaging. Excessive use of cushioning within the unit pack shall be avoided since an unnecessary increase in tare weight and cube will otherwise result. The performance requirements conforming to MIL-P-116 shall be given consideration when determining the actual required quantity of cushioning material (see 6.6). Cushioning materials which have not been chemically refined for noncorrosiveness shall only be used when such are contained in a sealed, waterproof barrier in accordance with PPP-B-1055. Cushioning materials used within the unit pack shall conform to this or any of, or combination of, the following specifications, at the contractor's option, which will provide the required protection (see 3.3.4).

<u>Specification</u>	<u>Material</u>	<u>Special requirements</u>
UU-P-268	Paper, Kraft Wrapping	For Navy, use type II, grade C or D
PPP-P-291	Paperboard, Wrapping and Cushioning	
PPP-F-320	Fiberboard	For Navy, use class-domestic/fire retardant
PPP-C-795	Plastic Film - Flexible Cellular	For Navy, use class 3
PPP-C-843	Cellulosic	
PPP-C-850	Polystyrene Expanded, Resilient	For Navy, use grade SE, type optional
PPP-C-1120	Bound Fiber	For Navy, use class A, grade 1, type optional
PPP-C-1752	Polyethylene Foam, Unicellular	
PPP-C-1797	Resilient, Low Density, Unicellular, Polypropylene Foam	
PPP-C-1842	Cushioning Material, Plastic, Open Cell	
MIL-B-3106	Board, Composition, Water-Resistant, Solid	
MIL-R-5001	Rubber, Latex Foam, Sponge	For Navy, use grade A, type and class optional
MIL-R-6130	Rubber, Cellular	For Navy, use grade A
MIL-P-19644	Plastic Molding Material (Polystyrene Foam, Expanded Bead)	For Navy, use type II
MIL-R-20092	Rubber Sheets and Molded Shapes, Cellular, Synthetic, Exploded Cell	For Navy, use class 5

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<u>Specification</u>	<u>Material</u>	<u>Special requirements</u>
MIL-P-26514	Polyurethane Foam	For Navy, use type I, class I or II, grade A, B or C
MIL-C-26861	Resilient Type, General	
MIL-F-81334	Foam, Plastic, Flexible, Open Cell Polyester Type, Polyurethane	
MIL-F-87090	Foam, Combustion Retardant, for Cushioning Supply Items Aboard Navy Ships	

3.9.1.1.1.1 Other items. A barrier shall not be required between the cushioning of items such as textiles, rubber, plastic, and other such items. Cushioning devices which provide a metal to metal contact between the item and the cushioning system shall not require the use of the barrier material separator specified herein.

3.9.1.1.2 Transparent unit protection. Unless otherwise specified herein, when transparent unit protection is selected by the contractor, or required by the acquisition document, selection of materials (cushioning, films and bags) shall be in accordance with the material requirements of MIL-P-116 for the applicable method or submethod of preservation. Intimate wraps or cushioning applied to the item shall also be transparent. Transparent wrapping or cushioning materials shall conform to MIL-B-22191 type II or III, PPP-C-795 or L-P-378.

3.9.1.1.2.1 Submarine material. Transparent packaging shall be in accordance with MIL-STD-758.

3.9.1.1.3 Volatile corrosion inhibitor (VCI). When VCI is selected (see table I, column 3, P-18), the preservation procedure shall be in accordance with MIL-I-8574. Unless otherwise specified (see 6.2.1), application of a contact preservative compound shall not be required. Transparent, flexible, VCI-treated films or bags, when used, shall conform to MIL-B-22019 or MIL-B-22020, respectively. Items that are unit protected with VCI-treated materials shall have each unit pack marked or provided with a caution label stating the following:

"WASH HANDS AFTER HANDLING VCI MATERIAL TO AVOID EYE OR SKIN IRRITATION."

3.9.1.1.4 Interior containers.

3.9.1.1.4.1 Unit containers. Unless otherwise specified (see 6.2.1), unit containers, except those as specified in MIL-P-116 for the applicable method or submethod of preservation, shall conform to any one of the following specifications, at the contractor's option, which will provide the required protection. Paperboard and fiberboard containers shall be of the weather-resistant type, class, or grade.

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<u>Specification</u>	<u>Container</u>
PPP-B-566	Box, Paperboard, Folding
PPP-B-636	Box, Fiberboard
PPP-B-665	Box, Paperboard, Metal-Stayed
PPP-B-676	Box, Paperboard, Setup
PPP-C-96	Can, Metal, 28 Gage and Lighter
MIL-C-3955	Can, Fiber, Spirally Wound
MIL-D-6055	Drum, Metal, Reusable

Sealing and closure, as applicable, of unit containers shall conform to the applicable container specification or appendix thereto, and as specified herein. Closure of fiberboard boxes shall conform to method V. Bags may be used for packaging small parts conforming to method III, when practicable. Bag closure shall be effected by heat-sealing, adhesives, or taping. Use of other type bag closure such as pressure-fit, zipper, and others, is acceptable for method III, provided that loss of contents shall not result. When the items exceed the weight limitations of the preceding unit containers, parts shall be packed directly into shipping containers for the degree of packing specified (see 3.9.2).

3.9.1.1.4.2 Intermediate containers. Unit quantities in an intermediate container shall be as specified (see 6.2.1). Intermediate containers shall be uniform in size and shape and shall contain equal quantities in multiples of five, not exceeding 100 unit packs within the weight limitations specified herein. Unless otherwise specified (see 6.2.1), intermediate containers shall conform to any one of the following specifications, at the contractor's option, which will provide the required protection. Paperboard and fiberboard containers shall be of the weather-resistant type, class or grade.

<u>Specification</u>	<u>Container</u>
PPP-B-566	Box, Paperboard, Folding
PPP-B-636	Box, Fiberboard
PPP-B-665	Box, Paperboard, Metal-Stayed
PPP-B-676	Box, Paperboard, Setup
PPP-B-1672	Box, Fiberboard, Reusable with Cushioning

Box closure shall conform to the applicable container specification or appendix thereto and as specified herein. Closure of fiberboard boxes shall conform to method V. The gross weight of paperboard boxes shall not exceed 10 pounds. Unless otherwise specified (see 6.2.1), the gross weight of fiberboard boxes shall not exceed 20 pounds (9.072 kilograms (kg)).

3.9.1.1.4.3 Department of the Army only. Intermediate containers shall not exceed a maximum of 40 pounds (18.14 kg) net weight and a maximum of 1.5 cubic feet (0.0425 cubic meter), with at least each of two dimensions not exceeding 16 inches (40.64 centimeters (cm)).

3.9.1.1.5 Provisioned items. Provisioned material shall be preserved in accordance with table I. When the acquisitioning document specifies material to be furnished with the system or equipment, the material shall be packed in separate shipping containers for the level of packing specified (see 3.9.2).

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3.9.1.1.5.1 Arrangement of material in containers. Material shall be arranged within the container in a compact manner. When applicable, material accompanying equipment shall be grouped together in intermediate containers. Each intermediate container shall be marked with the stock number of the items contained in the package. This will provide accessibility of like parts without undue disturbance of the other parts.

3.9.1.1.5.2 Repair parts storage boxes. When the item exceeds the size of the bin or drawer-type stowage, or when bin or drawer-type stowage is not provided, and when specified (see 6.2.1), repair parts accompanying the equipment shall be furnished in repair parts boxes conforming to type M or W of MIL-B-233 as specified (see 3.9.2.7 and 6.2.1). When the size of repair parts storage boxes is less than the minimum size specified in MIL-B-233, material accompanying the equipment shall be furnished in boxes conforming to PPP-B-636, class weather-resistant, special requirements. Closure of the fiberboard boxes shall be in accordance with method V of the appendix to the box specification.

3.9.1.1.5.3 Index list of material. An index list of material shall be inserted in each shipping container containing repair parts accompanying the equipment or acquired as a set or kit. The list shall be inserted in the index list support located on the interior side of the cover of the repair parts box or suitably placed on the inside of the box for quick accessibility of the list. The list shall be placed in a transparent, waterproof plastic bag, minimum 4 mils thick. Closure shall be by heat sealing.

3.9.1.1.5.4 Sets or kits. When sets or kits of tools are furnished, preservation of individual tools shall be in accordance with table I, except as follows:

- (a) Sets of kits of tools furnished in a plastic or leather case shall be unit packaged conforming to IC-2 of MIL-P-116.
- (b) Sets or kits of tools furnished in finished wooden cases such as varnished, wood micrometer cases intended for use as a tool box or chest shall have each tool preserved as specified in table I. The unit pack shall be preserved conforming to IC-2 of MIL-P-116, with the wood case as the inner container. Projections such as hinges and catches on the inner container shall be cushioned with material as specified in 3.9.1.1.1. The outer container of the unit pack shall conform to PPP-B-636, class weather-resistant. Outer container closure shall conform to method V of the appendix to PPP-B-636.
- (c) Tools in a kit, which may be damaged by preservatives from other tools, shall be wrapped or bagged.

3.9.1.2 Level B (see 6.4.1.2). Cleaning, drying, preservative application, and the methods of preservation shall conform to MIL-P-116 and table I herein and as specified in the substitution list as follows:

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<u>Level A</u>	<u>Level B</u>
II	IA or IC
IA	IC
IC*	III or I
I	I
III	III

*Paper products shall receive a preservation method not lower than IC.

3.9.1.3 Level C. Cleaning, drying, preservatives and methods of preservation (unit protection) shall be as specified for level B (see 3.9.1.2) except that interior containers (see 3.9.1.1.4) may be of the non-weather resistant or domestic type, class or grade with selection at the option of the contractor.

3.9.1.3.1 Department of the Army only. Unless otherwise specified (see 6.2.1), unit and intermediate containers not conforming to weather-resistant class requirements of PPP-B-636 and PPP-B-676 shall be overwrapped with barrier material to provide equal weather-resistant protection.

3.9.1.4 Commercial. Commercial packaging shall conform to ASTM D 3951.

3.9.2 Packing. Packing shall be level A, B, C, or commercial, as specified (see 6.2.1).

3.9.2.1 General requirements.

3.9.2.1.1 Shipping containers. Unless otherwise specified (see 6.2.1), containers for packing levels A, B, and C shall conform to the exterior shipping container requirements of MIL-STD-2073-1. When the acquisition document does not specify MIL-STD-2073-1, exterior containers for the level of packing required shall be as specified herein. Shipping containers shall be of minimum weight and cube. Containers listed herein shall not preclude the use of other containers listed, provided they have been approved by the contracting activity (see 6.2.1). Shipping containers shall be of similar construction, of uniform size, consistent with protection required, and shall contain, when practicable, identical quantities of identical items. Special tools, when furnished, shall be packed with the item for which they are intended.

3.9.2.1.2 Anchoring, blocking, bracing, cushioning, and waterproofing. Anchoring, blocking, bracing, cushioning, and waterproofing of container contents shall be in accordance with MIL-STD-1186, MIL-P-116, 3.9.1.1.1 herein, and the applicable container specification or appendix thereto. Supplemental information is provided as specified in 6.6.

3.9.2.1.3 Air shipments. Packing for air shipment shall conform to MIL-A-25175.

3.9.2.2 Level A. Unless otherwise specified (see 6.2.1), material preserved as specified (see 3.9.1) shall be packed in containers conforming to any one of the following specifications at the contractor's option:

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<u>Specification</u>	<u>Container (see 3.8)</u>	<u>Type, class or style (see note 1)</u>	<u>Remarks</u>
PPP-B-585	Wood, Wirebound	Class 3	(see note 2)
PPP-B-601	Wood, Cleated- Plywood	Overseas	(see note 2)
PPP-B-621	Wood, Nailed and Lock-Corner	Class 2	(see note 2)

NOTES:

1. Maximum gross weight, container plus contents, shall not exceed the applicable requirements for the style, type or class container selected.
2. Shipping containers exceeding 200 pounds (90.72 kg), gross weight shall be modified to include a skid-type base providing a minimum clearance of 2-1/2 inches (3.81 cm) to facilitate handling by mechanical handling equipment during transportation, storage, and stowage.

3.9.2.2.1 Closure, reinforcing and waterproofing. Wood, plywood, and cleated boxes shall be closed and reinforced in accordance with the applicable container specification or appendix thereto. Unless otherwise specified (see 6.2.1), wood, plywood, and cleated shipping containers shall be provided with waterproofing as specified in 3.9.2.1.2. When shipping containers are packed with products or packages meeting the following requirements, waterproofing will not be required:

- (a) Items which are completely painted and have no unprotected critical surfaces.
- (b) Large items which are completely coated with a corrosion resistant paint or preservative type P-1, P-19, or P-10 with critical surfaces, if any, on the interior of the item and where the critical interior surfaces are preserved and all openings sealed (see 3.7).
- (c) Method IC packs.
- (d) Method II packs when all materials exterior to the water vapor-barrier have water resistance equal to or exceeding the water resistance conforming to PPP-B-636 fiberboard boxes.
- (e) Intermediate packs (or unit packs when no intermediate packs are required) for which the container conforms to the weather-resistant class of PPP-B-636, and such are closed and water-proofed as specified herein.

3.9.2.3 Level B. Unless otherwise specified (see 6.2.1), material preserved as specified (see 3.9.1) shall be packed in containers conforming to any one of the following specifications at the contractor's option:

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<u>Specification</u>	<u>Container (see 3.8)</u>	<u>Type, class or style (see note 1)</u>	<u>Remarks</u>
PPP-B-576	Wood, Cleated, Veneer Paper Overlaid	Class 2	(see note 2)
PPP-B-585	Wood, Wirebound	Class 2	(see note 2)
PPP-B-591	Fiberboard, Wood-Cleated	Weather-resistant	
PPP-B-601	Wood, Cleated- Plywood	Domestic	(see note 2)
PPP-B-621	Wood, Nailed and Lock-Corner	Class 1	(see note 2)
PPP-B-636	Fiberboard	Weather-resistant	(see note 2)
PPP-B-640	Fiberboard, Corrugated Triple-wall	Class 2	

NOTES:

1. Maximum gross weight, container plus contents, shall not exceed the applicable requirements for the style, type or class container selected.
2. Shipping containers exceeding 200 pounds (90.72 kg), gross weight shall be modified to include a skid-type base providing a minimum clearance of 2-1/2 inches (3.81 cm), to facilitate handling by mechanical handling equipment during transportation, storage, and stowage.

3.9.2.3.1 Closure, reinforcing and waterproofing. Closure, reinforcing and waterproofing of shipping containers shall be as specified in 3.9.2.2.1. Intermediate fiberboard containers (see 3.9.1.1.4.2) conforming to PPP-B-636, closed, sealed, reinforced and waterproofed as applicable, and used as shipping containers need not be over packed. When specified (see 6.2.1), waterproofing may be required for wood, plywood and cleated containers.

3.9.2.4 Level C. Material preserved as specified (see 3.9.1) shall be packed in containers as specified for level B (see 3.9.2.3), except that containers shall conform to the non-weather resistant, domestic type or class. Closure for PPP-B-636 containers shall conform to method I of the specification appendix, and waterproofing of containers is not required.

3.9.2.4.1 Skids. For shipping containers exceeding 200 pounds (90.72 kg) gross weight, or when the length and width is 48 by 24 inches (121.92 by 60.96 cm) or more and the weight exceeds 100 pounds (45.36 kg), a minimum of two 3 by 4 inch (7.62 by 10.16 cm) nominal skids, laid flat, shall be applied and secured in a manner which shall support the material and facilitate the use of material handling equipment during transportation, storage, and stowage.

3.9.2.5 Commercial. Commercial packing shall conform to ASTM D 3951, and where applicable, skids shall be applied as specified in 3.9.2.4.1.

3.9.2.6 Palletized unit loads. When applicable (see 6.2.1), material packed as specified shall be palletized conforming to MIL-STD-147.

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3.9.2.7 Repair parts boxes. Repair parts boxes (see 3.9.1.1.5.2), shall require overpacking for shipment in accordance with the applicable level of packing as specified in the acquisitioning document.

3.9.3 Marking. In addition to any special marking required (see 6.2.1 or herein), marking, including bar coding, of interior and exterior packs for levels A, B and C shall conform to MIL-STD-129. Marking for commercial interior and exterior packs shall conform to ASTM D 3951 and shall include bar code marking conforming to MIL-STD-129.

3.10 Workmanship. Workmanship shall be such that, when the proper procedures are followed, the material being processed will receive the required protection against corrosion, deterioration, and damage during shipment, storage, and stowage and will require the minimum processing for use.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or purchase order, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

4.1.1 Responsibility for compliance. All items must meet all requirements of sections 3 and 5. The inspection set forth in this specification shall become a part of the contractor's overall inspection system or quality program. The absence of any inspection requirements in the specification shall not relieve the contractor of the responsibility of assuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling in quality conformance does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to acceptance of defective material.

4.2 Classification of inspections. The inspection requirements specified herein are classified as follows:

- (a) First article inspection (see 4.4).
- (b) Quality conformance inspection (see 4.5).

4.3 Inspection conditions. Unless otherwise specified (see 6.2.1), all inspections shall be performed in accordance with the test conditions specified in the applicable specification.

4.4 First article.

4.4.1 First article inspection. The contractor shall conduct inspection on one complete package, packed for shipment, to ascertain that the preservation, packing and marking of the items conform to this specification. The first article sample will not be required when such a pack has previously been

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inspected and accepted for the same method for an identical item by the same contractor and satisfactory evidence can be furnished to the Government that the items have been prepared identically with the previously approved pack. First article inspection shall be repeated when changes are made in preservation and packing materials, processes, or designs.

4.4.2 First article testing. When specified (see 3.2 and 6.2.1), a complete pack of the items shall be subjected to the examination and tests conforming to MIL-P-116, including the rough handling tests. Method IC shall be tested for leakage in accordance with the hot water technique conforming to MIL-P-116. Unless otherwise specified (see 6.2.1), cyclic exposure tests shall not be required. Upon completion of the rough handling tests, the item shall be inspected, as applicable, in accordance with the initial acceptance limits of the item specification to determine freedom from operational malfunction.

4.4.3 First article test exceptions. First article testing (see 4.4.2) will not be required when:

- (a) Commercial preservation or packing is specified.
- (b) Detailed packaging instructions are furnished by the contracting activity such as a configuration controlled drawing or packaging requirements code.
- (c) The pack has been previously submitted and accepted (see 4.4.1).

4.4.4 Procedure and report. When specified in the contract or order, a first article inspection procedure and inspection report shall be prepared (see 6.2.2).

4.5 Quality conformance inspection.

4.5.1 Levels A, B and C. Unless otherwise specified (see 6.2.1), quality conformance inspection and inspection lots shall be in accordance with MIL-P-116, groups A and B.

4.5.2 Commercial. Unless otherwise specified (see 6.2.1), quality conformance inspection and inspection lots shall be in accordance with the contractor's procedures.

5. PACKAGING

(Not applicable to this specification.)

6. NOTES

6.1 Intended use. The packaging requirements specified in this specification are intended to assure proper and safe delivery, storage, stowage, and transportation of supply support items, accessories and kits for direct shipment to Government activities, or for material processed at a military activity; and for preparing packaging requirements in acquisition documents.

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6.2 Ordering data.

6.2.1 Acquisition requirements. Acquisition documents should specify the following:

- (a) Title, number, and date of this specification.
- (b) When first article is required (see 3.2 and 4.4.2).
- (c) When a dummy or simulated load may be used (see 3.2.1).
- (d) Unit pack quantity if other than specified (see 3.6).
- (e) When fire-retardant treatment for lumber and plywood is not required (see 3.8(a)).
- (f) When fire-retardant fiberboard is not required (see 3.8(b)).
- (g) Level of preservation and packing required (see 3.9.1 and 3.9.2).
- (h) When submethod selection is other than contractor's option (see 3.9.1.1).
- (i) When a preservative compound shall be used with VCI (see 3.9.1.1.3).
- (j) Interior container (unit and intermediate) selection if other than contractor's option (see 3.9.1.1.4.1 and 3.9.1.1.4.2).
- (k) Unit quantities required in an intermediate container (see 3.9.1.1.4.2).
- (l) When gross weight of fiberboard containers may exceed 20 pounds (9.072 kg) (see 3.9.1.1.4.2).
- (m) Whether repair parts boxes are required; if required, the type required (see 3.9.1.1.5.2).
- (n) When an interior container barrier material overwrap is not required (see 3.9.1.3.1).
- (o) Container selection, if other than specified (see 3.9.2.1.1).
- (p) Approval of unlisted containers (see 3.9.2.1.1).
- (q) Shipping container selection if other than contractor's option (see 3.9.2.2 and 3.9.2.3).
- (r) When waterproofing is not required (see 3.9.2.2.1).
- (s) When waterproofing is required (see 3.9.2.3.1).
- (t) Palletized unit loads when applicable (see 3.9.2.6).
- (u) Special marking required (see 3.9.3).
- (v) Test conditions if other than specified (see 4.3).
- (w) When cyclic exposure tests are required (see 4.4.2).
- (x) When quality conformance inspection and inspection lots are other than as specified (see 4.5.1).
- (y) Quality conformance inspection and inspection lot requirements, if other than specified (see 4.5.1 and 4.5.2).

6.2.2 Data requirements. When this specification is used in an acquisition and data are required to be delivered, the data requirements identified below shall be developed as specified by an approved Data Item Description (DD Form 1664) and delivered in accordance with the approved Contract Data Requirements List (CDRL), incorporated into the contract. When the provisions of DoD FAR Supplement, Part 27, Sub-Part 27.475-1 (DD Form 1423) are invoked and the DD Form 1423 is not used, the data specified below shall be delivered by the contractor in accordance with the contract or purchase order requirements. Deliverable data required by this specification are cited in the following paragraphs.

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<u>Paragraph no.</u>	<u>Data requirement title</u>	<u>Applicable DID no.</u>	<u>Option</u>
3.2.1	Notification of tests	DI-T-23731	----
3.3.2.1 and 3.3.3.3	Certificate of compliance	DI-E-2121	----
3.4.1	Drawings, engineering and associated lists	DI-E-7031	----
3.4.1	Special packaging instruction (SPI)	DI-PACK-80121	----
3.4.2	Preservation and packing data	DI-PACK-80120	----
3.4.3	Plan, integrated logistic support (ILSP) PHST (packaging), handling, storage and transportation section	UDI-L-21054	----
4.4.4	First article inspection procedure	DI-T-4901	----
4.4.4	First article inspection report	DI-T-4902	----

(Data item descriptions related to this specification, and identified in section 6 will be approved and listed as such in DoD 5010.12-L., AMSDL. Copies of data item descriptions required by the contractors in connection with specific acquisition functions should be obtained from the Naval Publications and Forms Center or as directed by the contracting officer.)

6.2.2.1 The data requirements of 6.2.2 and any task in sections 3, 4, or 5 of this specification required to be performed to meet a data requirement may be waived by the contracting/acquisition activity upon certification by the offeror that identical data were submitted by the offeror and accepted by the Government under a previous contract for identical item acquired to this specification. This does not apply to specific data which may be required for each contract regardless of whether an identical item has been supplied previously (for example, test reports).

6.3 First article. When a first article inspection is required, the item should be a first article sample. The first article should consist of one unit. The contracting officer should include specific instructions in acquisition documents regarding arrangements for examinations, approval of first article test results and disposition of first articles. Invitations for bids should provide that the Government reserves the right to waive the requirement for samples for first article inspection to those bidders offering a product which has been previously acquired or tested by the Government, and that bidders offering such products, who wish to rely on such production or test, must furnish evidence with the bid that prior Government approval is presently appropriate for the pending contract.

6.4 Definitions or explanation of terms.

6.4.1 Levels of protection. The following levels of protection apply equally to preservation and packing:

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6.4.1.1 Level A. This packaging provides maximum protection. It is needed to protect material under the most severe worldwide shipment, handling and storage conditions. Preservation and packing should protect material against direct exposure to extremes of climate, terrain, and operational and transportation environments, without protection other than that provided by the pack. The conditions to be considered include, but are not limited to:

- (a) Multiple handling during transportation and intransit storage from point of origin to final user.
- (b) Shock, vibration, and static loading during shipment.
- (c) Loading on shipdeck, transfer at sea, helicopter delivery, and offshore or over-the-beach discharge, to final user.
- (d) Environmental exposure during shipment or during intransit operations where port and warehouse facilities are limited or nonexistent.
- (e) Outdoor storage in all climatic conditions for a minimum of 1 year.
- (f) Static loads imposed by stacking.

Note: For packing (exterior containers) it has been determined and agreed upon by the joint DoD packaging administrators that fiberboard and paperboard are not acceptable materials for use under level A packing.

6.4.1.2 Level B. This packaging provides intermediate protection. It is needed to protect material under anticipated favorable environmental conditions of worldwide shipment, handling, and storage. Preservation and packing should protect material against physical damage and deterioration during favorable conditions of shipment, handling, and storage. The conditions to be considered include, but are not limited to:

- (a) Multiple handling during transportation and intransit storage.
- (b) Shock, vibration, and static loading of shipments worldwide by truck, rail, aircraft, or ocean transport.
- (c) Favorable warehouse environment for a minimum of 18 months.
- (d) Environmental exposure during shipment and intransit transfers, excluding deck loading and offshore cargo discharge.
- (e) Stacking and supporting superimposed loads during shipment and extended storage.

Note: For packing (exterior containers) weather-resistant grades of fiberboard and paperboard are permitted under level B. Domestic type or grade (non-weather resistant) fiberboard and paperboard are not acceptable under level B packing. Level B packing as defined in 6.4.1.2(b) covers shipment worldwide by all types of transportation.

6.4.1.3 Level C. This packaging provides minimum protection. It is needed to protect material under known favorable conditions. The following criteria determine the requirements for this degree of protection:

- (a) Use or consumption of the item at the first destination.
- (b) Shock, vibration, and static loading during the limited transportation cycle.

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- (c) Favorable warehouse environment for a maximum of 18 months.
- (d) Effects of environmental exposure during shipment and intransit delays.
- (e) Stacking and supporting superimposed loads during shipment and temporary storage.

6.4.1.4 Commercial. Although not specifically defined by any Government regulation or instruction, commercial packaging (preservation and packing) is understood to be those practices by manufacturers and suppliers to protect and identify material and items packaged for retail and wholesale distribution purposes. ASTM D 3951 provides guidance in the application of commercial packaging. It has been determined by joint DoD instructions that commercial, also in some areas addressed as industrial packaging, should only be used or specified when such packaging is known to satisfy the DoD needs. Such use should be determined before a contract for supplies is awarded or within the life cycle of the contract when substantial savings to the Government may result. Commercial (industrial) packaging should not be specified where multiple shipment and handlings are anticipated or desired.

6.4.2 Packaging and supply terms.

6.4.2.1 Critical items. Critical items are items meeting one or more of the following criteria:

- (a) Chemically critical. Chemically critical items are items of such a nature that any degree of deterioration (in the form of rust, stain, scale, mold, fungi, or bacteria) when acted upon by oxygen, moisture, sunlight, living organisms, temperature, time, and other contaminants, will result in premature failure or malfunction of the item or equipment in which installed or to which the item is related.
- (b) Physically critical. Physically critical items are items having a surface finish of 63 micro-inches or less and items requiring a high degree of cleanliness, free of contamination, special protection against shock, vibration, abrasion, or distortion.

6.4.2.2 Exterior pack. An exterior pack is a container, bundle, or assembly which is sufficient by reason of material, design, and construction to protect material during shipment and storage. This can be the unit pack or a container with any combination of unit or intermediate packs.

6.4.2.3 Intermediate pack. An intermediate pack is a wrap, box, or bundle which contains two or more unit packs of identical items.

6.4.2.4 Marking. Marking is an application of numbers, letters, labels, tags, symbols, or colors for handling or identification during shipment and storage.

6.4.2.5 Military packaging. Military packaging is the materials and methods or procedures prescribed in Federal and Military specifications, standards, drawings or other authorized documents, which provide the level of packaging protection determined necessary to prevent damage and deterioration during worldwide distribution of material.

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6.4.2.6 Noncritical items. Noncritical items are all items not meeting the criteria set forth for critical items.

6.4.2.7 Packaging. Packaging is the process and procedures used to protect material from deterioration or damage. It includes cleaning, drying, preserving, packing, marking, and unitization.

6.4.2.8 Packing. Packing is the assembling of items into a unit, intermediate, or exterior pack with necessary blocking, bracing, cushioning, weather-proofing, reinforcement and marking.

6.4.2.9 Preservation. Preservation is the application of protective measures, including cleaning, drying, preservative materials, barrier materials, cushioning, and containers when necessary.

6.4.2.10 Repair parts. Repair parts are those support items that are coded to be not repairable (that is, consumable items (see MIL-STD-1561)).

6.4.2.11 Spares. Spares are those support items that are coded to be repairable (that is, repairable items (see MIL-STD-1561)).

6.4.2.12 Support items. Support items are items subordinate to, or associated with, an end item (that is, spares, repair parts, tools, test equipment, support equipment and sundry materials) and required to operate, service, repair, or overhaul an end item (see MIL-STD-1561).

6.4.2.13 Unit pack. Unit pack is the first tie, wrap, or container applied to a single item or quantity thereof, or to a group of items of a single stock number, preserved or unpreserved, which constitutes a complete or identifiable package.

6.5 Asbestos. It is the intent of the Government to eliminate the use of asbestos except in those cases that a suitable alternative material cannot be used to obtain the desired results. In those cases in which components or materials being packaged contain asbestos predominately in their make-up, such items will be separately packaged and marked (see 3.3.3).

6.6 Detailed information. Supplemental information on packaging may be found in the following manuals:

DSAM 4145.2, Vol. I, TM38-230-1, NAVSUP PUB 502, AFP 71-15, MCO P4030.31B, Preservation and Packaging (Volume I) (National Stock Number 0530-LP-050-2073).

DSAM 4145.2, Vol. II, TM38-230-2, NAVSUP PUB 503, Vol. II, AFR 71-16, MCO P4030.21C, Packing (Volume II) (National Stock Number 0530-LP-050-3211).

DSAM 4145.7, TM38-236, NAVSUP PUB 504, AFP 15-01-3, AFP 71-8, MCO P4030.30B, Preparation of Freight for Air Shipment (National Stock Number 0530-LP-050-4001).

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DSAM 4145.3, TM38-250, NAVSUP PUB 505, AFR 71-4, MCO P4030.19D, Preparation of Hazardous Materials for Military Air Shipment (National Stock Number 0530-LP-050-5007).

MIL-HDBK-304, Package Cushioning Design.

(Copies of the listed documents may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.)

6.7 Material safety data sheets. Contracting officers will identify those activities requiring copies of completed material safety data sheets prepared in accordance with FED-STD-313 and 29 CFR 1910.1200. The pertinent Government mailing addresses for submission of data are listed in FED-STD-313. In order to obtain the MSDS, federal acquisition regulation, (FAR) clause 52.223-3 must in the contract.

6.8 Subject term (key word) listing.

Compressors
Engines, cushioning and wrapping
Internal combustion engines
Pumps
Turbines
Volatile corrosion inhibitor (VCI)

6.9 Changes from previous issue. Asterisks are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

Custodians:

Army - SM
Navy - SH
Air Force - 69

Preparing activity:

Navy - SH
(Project PACK-0812)

Review activities:

Army - AR, ME
Navy - YD
Air Force - 70, 71, 84, 11

User activities:

Army - AT
Navy - EC, MC

INSTRUCTIONS: In a continuing effort to make our standardization documents better, the DoD provides this form for use in submitting comments and suggestions for improvements. All users of military standardization documents are invited to provide suggestions. This form may be detached, folded along the lines indicated, taped along the loose edge (*DO NOT STAPLE*), and mailed. In block 5, be as specific as possible about particular problem areas such as wording which required interpretation, was too rigid, restrictive, loose, ambiguous, or was incompatible, and give proposed wording changes which would alleviate the problems. Enter in block 6 any remarks not related to a specific paragraph of the document. If block 7 is filled out, an acknowledgement will be mailed to you within 30 days to let you know that your comments were received and are being considered.

NOTE: This form may not be used to request copies of documents, nor to request waivers, deviations, or clarification of specification requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

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STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

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1. DOCUMENT NUMBER MIL-S-196D		2. DOCUMENT TITLE SUPPORT ITEMS, ACCESSORIES, AND KITS, MECHANICAL: PACKAGING OF	
3a. NAME OF SUBMITTING ORGANIZATION		4. TYPE OF ORGANIZATION (Mark one)	
b. ADDRESS (Street, City, State, ZIP Code)		<input type="checkbox"/> VENDOR	
		<input type="checkbox"/> USER	
		<input type="checkbox"/> MANUFACTURER	
		<input type="checkbox"/> OTHER (Specify): _____	
5. PROBLEM AREAS			
a. Paragraph Number and Wording:			
b. Recommended Wording:			
c. Reason/Rationale for Recommendation:			
6. REMARKS			
7a. NAME OF SUBMITTER (Last, First, MI) - Optional		b. WORK TELEPHONE NUMBER (Include Area Code) - Optional	
c. MAILING ADDRESS (Street, City, State, ZIP Code) - Optional		8. DATE OF SUBMISSION (YYMMDD)	

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