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MILITARY SPECIFICATION

PADLOCKS AND PADLOCK SETS, LOW SECURITY, KEY OPERATED, REGULAR (OPEN) SHACKLE

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

1. SCOPE

1.1 Scope. This specification covers key operated, pin tumbler, dead-bolt padlocks and padlock sets for military use.

1.2 Classification. The padlocks and padlock sets covered by this specification shall be of the grades, classes, types, sizes, and styles as specified (see 1.2.1 and 6.2).

1.2.1 Part numbers. A Specification Part Number (SPN) has been established. The SPN is made up of the document identifier and the SPN code numbers (see 6.2 and 6.5).

	SPN Code No.
Grade I - Brass or bronze shackle and case.	1
Class 1, Type A - Individual lock (no master keying).	A
Class 1, Type B - Master keyed sets (applicable to Grade I only).	B
Class 1, Type C - Grandmaster keyed sets (applicable to Grade I only).	C
Class 2 - Keyed alike (applicable to Grade I only).	2

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Commanding Officer (Code 156), Naval Construction Battalion Center, Port Hueneme, CA 93043-5000, by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A FSC 5340

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

	SPN Code No.
Grade I - Brass or bronze shackle and case - (continued).	
Size 1 - 1.125 inch.	1
Size 2 - 1.500 inch.	2
Size 3 - 1.750 inch.	3
Style A - Regular shackle.	A
Style B - Long shackle (applicable for Sizes 2 and 3 only).	B
Grade II - Hardened steel shackle and steel case.	2
Class 1, Type A - Individual lock (no master keying).	A
Size 1 - 1.125 inch.	1
Size 2 - 1.500 inch.	2
Size 3 - 1.750 inch.	3
Style A - Regular shackle.	A
Style B - Long shackle (applicable for Size 2 and 3 only).	B
Grade III - Hardened steel shackle and brass or bronze case.	3
Class 1, Type A - Individual lock (no master keying).	A
Size 1 - 1.125 inch.	1
Size 2 - 1.500 inch.	2
Size 3 - 1.750 inch.	3
Style A - Regular shackle.	A
Style B - Long shackle (applicable for Size 2 and 3 only).	B

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

QQ-B-626 - Brass, Leaded and Non-Leaded: Rod, Shaped, Forgings, and Flat Products with Finished Edges (Bar and Strip).

QQ-B-637 - Brass, Naval: Rod, Wire, Shapes, Forgings, and Flat Products with Finished Edges (Bar, Flat Wire, and Strip).
QQ-C-320 - Chromium Plating (Electrodeposited).
QQ-C-390 - Copper Alloy Casting (Including Cast Bar).
QQ-P-416 - Plating, Cadmium (Electrodeposited).
RR-C-271 - Chains and Attachments, Welded and Weldless.
TT-L-26 - Lacquer: Cellulose Nitrate, Brushing, Gloss.
PPP-B-566 - Boxes, Folding, Paperboard.
PPP-B-601 - Boxes, Wood, Cleated-Plywood.
PPP-B-621 - Boxes, Wood, Nailed and Lock-Corner.
PPP-B-636 - Boxes, Shipping, Fiberboard.
PPP-T-60 - Tape, Packaging, Waterproof.

MILITARY

MIL-P-116 - Preservation, Methods of.
MIL-M-7866 - Molybdenum Disulfide, Technical, Lubrication Grade.
MIL-B-12128 - Brass, Sintered; Structural Parts.
MIL-C-17112 - Copper-Nickel-Zinc Alloy (Nickel-Silver): Castings.
MIL-G-20241 - Gasket Material, Wool Felt, Impregnated, Adhesive, Pressure-Sensitive.
MIL-S-81733 - Sealing and Coating Compound, Corrosion Inhibitive.
MIL-V-83148 - Varnishes, Electrically Insulative, Moisture-Fungus-, High-Temperature-Resistant.

STANDARDS

FEDERAL

FED-STD-66 - Steel: Chemical Composition and Hardenability.

MILITARY

MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes.
MIL-STD-129 - Marking for Shipment and Storage.
MIL-STD-889 - Dissimilar Metals.
MS21313 - Padlock Sets - Individually Keyed and Keyed Alike.
MS35647 - Padlock, Key Operated.

(Copies of specifications and standards 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 the documents not listed in the DODISS shall be the issues of the non-Government documents which are current on the date of the solicitation.

AMERICAN SOCIETY FOR TESTING AND MATERIAL (ASTM)

A153 - Zinc Coating (Hot-dip) on Iron and Steel Hardware.
B159 - Phosphor Bronze Wire.
B633 - Electrodeposited Coating of Zinc on Iron and Steel.
D3951 - Standard Practice for Commercial Packaging.
E18 - Test Methods for Rockwell Hardness and Rockwell Superficial Hardness of Metallic Materials.

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

(Non-Government 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. In the event of a conflict between the text of this specification and the references cited herein (except for associated detail specifications or MS standards), the text of this specification shall take precedence. Nothing in this specification, however, shall supersede applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 Standard commercial product. The padlocks and padlock sets shall, as a minimum, be in accordance with the requirements of this specification and shall be the manufacturer's standard commercial product. Additional or better features which are not specifically prohibited by this specification but which are a part of the manufacturer's standard commercial product, shall be included in the padlocks and padlock sets being furnished. A standard commercial product is a product which has been sold or is being currently offered for sale on the commercial market through advertisements or manufacturer's catalogs, or brochures, and represents the latest production model.

3.2 First article. When specified in the contract or purchase order a sample shall be subjected to first article inspection (see 4.2.1 and 6.4).

3.3 Materials. Materials used shall be free from defects which would adversely affect the performance or maintainability of individual components or of the overall assembly. Materials not specified herein shall be of the same quality used for the intended purpose in commercial practice. Unless otherwise specified herein, all equipment, material, and articles incorporated in the work covered by this specification are to be new and fabricated using materials produced from recovered materials to the maximum extent possible

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. None of the above shall be interpreted to mean that the use of used or rebuilt products are allowed under this specification unless otherwise specified.

3.3.1 Grade I padlocks. Padlock components, except springs, shall be brass or bronze conforming to QQ-B-626, QQ-B-637, QQ-C-390, or MIL-B-12128, composition 3, class A. Nickel silver conforming to MIL-C-17112 may be used for tumbler pins and keys.

3.3.2 Grade II padlocks. The case of the grade II padlocks shall be corrosion-resisting steel, carbon steel, or alloy steel. The padlock shackle for grade II padlocks shall be heat treatable steel, conforming to FED-STD-66. The attachments except springs, for grade II padlocks shall be of zinc coated steel conforming to the FED-STD-66. The coating shall be applied in accordance with ASTM A153 or ASTM B633.

3.3.3 Grade III padlocks. The case for grade III padlocks shall conform to the material requirements in 3.3.1. The shackle of grade III padlocks shall conform to the material requirements for shackles in 3.3.2. The attachments, except springs, for grade III padlocks shall be of zinc coated steel conforming to the material requirements of FED-STD-66. The coating shall be applied in accordance with ASTM A153 or ASTM B633.

3.3.3.1 Material deterioration and control. The padlocks and padlock sets shall be fabricated from compatible materials, inherently corrosion and deterioration resistant or treated to provide protection against the various forms of corrosion and deterioration that may be encountered in any of the applicable storage and operating environments to which the items may be exposed.

3.3.3.2 Dissimilar metals. Dissimilar metals, as defined in MIL-STD-889, shall be electrically insulated from one another to minimize or prevent galvanic corrosion. Insulation may be provided by an insulating barrier such as a corrosion inhibiting sealant conforming to MIL-S-81733 or chromate tape conforming to MIL-G-20241 or varnish conforming to MIL-V-83148.

3.3.3.3 Identification of materials and finishes. The contractor shall identify the specific material, material finish or treatment for use with components and sub-components, and shall make information available, upon request, to the contracting officer or designated representative.

3.4 Design and construction requirements. The grade I, II, and III padlocks shall conform to the configuration and dimensions shown in MS21313 and MS35647, as applicable. Major component parts of the padlock are illustrated in figure 1.

3.4.1 Case. The case shall contain the locking mechanism, keyway plug, and shackle legs. When the case is completely assembled (unlocked position), it shall have no openings other than the keyway and the shackle toe opening, except that drainage holes in the base are permitted. The diameter of the drainage holes shall be not greater than 0.093 inch. Drainage holes shall not provide access to pin tumblers, locking bolts, or plug retainer. The case for grade I padlocks shall have a hardness range of not less than 40 on the Rockwell B scale (see 4.5.1). The case for grade II padlocks may be solid or brazed laminated construction, and shall have a hardness range of 40 to 50 on the Rockwell C scale see 4.5.1). The cases of grade III padlocks shall have a hardness range of not less than 40 on the Rockwell B scale (see 4.5.1).

3.4.2 Shackles. The shackle shall have cutaways at both toe and heel for mating with the locking bolt. The shackle for grade I padlocks shall be not less than 40 on the Rockwell B scale (see 4.5.1). Shackles for grade II and III padlocks shall have a hardness range of 50 to 55 on the Rockwell C scale (see 4.5.1). Shackles in the assembled padlock shall resist tension loads as follows (see 4.5.5):

a. 500 pounds (lbs) for the size 1 (1.125 inch).
b. 800 lbs for the size 2 (1.500 inch).
c. 1,000 lbs for the size 3 (1.750 inch).

3.4.3 Chain and clevis. When specified (see 6.2), the padlock shall be supplied with attached chain and clevis. The chain shall conform to RR-C-271, and shall be either a weldless double loop pattern, type II, class 2 (0.072 inch diameter), or a weldless safety chain, type II, class 6 (0.028 inch diameter). The chain length shall be 9 inches, plus or minus one link. Chain shall be brass for grade I padlocks and zinc coated steel for grades II and III padlocks. The chain shall be secured to the padlock with a clevis of the same material and finish as the chain. The clevis shall be attached either to the case or shackle as shown in MS21313 or MS35647, as applicable.

3.4.4 Springs. The padlock springs shall be made from phosphor-bronze conforming to ASTM B159.

3.4.5 Mechanism. The mechanisms for grade I, II, and III padlocks shall be pin tumbler type, key operated. There shall be not less than four pin tumblers for size 1 padlocks, not less than five pin tumblers for size 2 padlocks, and either five or six pin tumblers for the class 1, type A, and class 2, size 3 padlocks. There shall be not less than six pin tumblers for the class 1, type B and type C, size 3 padlocks. Pins and plug shall be closely fitted to provide the number of key changes specified in 3.4.7.3. The plug shall be securely fastened within the case to preclude forcible separation or opening of the padlock without mutilation (see 4.5.6). The method of securing the locking mechanism within the case shall not be visible externally. The key shall not be removable from the padlock when the shackle

is in the open position. Unless otherwise specified (see 6.2), a spring shall be required for actuating the shackle. The padlock mechanism shall resist attempts to pick and bypass when tested as specified in 4.5.2 for the elapsed time specified as follows:

a. Class 1, type A (individually keyed): not less than 60 seconds.
b. Class 1, type B (master keyed): not less than 50 seconds.
c. Class 1, type C (grand master keyed): not less than 40 seconds.
d. Class 2 (keyed alike): not less than 30 seconds.

3.4.6 Locking bolt. The locking mechanism shall not depend on spring action to hold the bolt in locked position. End pressure on the dead-bolt, when exerted by a burglar's tool known as a "shim" or "sneaker," shall not move the bolt (see 4.5.2). Both heel and toe of shackle shall be engaged by the locking bolt mechanism (see figure 2).

3.4.7 Keys. All keys shall have a hardness of not less than 75 on the Rockwell B scale. Identical keys for each padlock shall be joined with a steel wire ring not less than 0.32 inch in diameter. Class 1, type A and class 2 padlocks shall be supplied with the number of keys as specified (see 6.2). Locks shall not be operable or subject to key manipulation or interchange except by the key, and master key if applicable, designed to operate the lock when tested as specified in 4.5.3.

3.4.7.1 Master keys. Unless otherwise specified (see 6.2), two master keys shall be supplied with each group or set of class 1, type B padlocks. The master key shall open all padlocks in the type B group, but it shall not open any of the padlocks of another type B group.

3.4.7.2 Grandmaster keys. Unless otherwise specified (see 6.2), two grandmaster keys shall be supplied with each set of type C padlocks.

3.4.7.3 Key changes. Class 1 padlocks shall have key changes as follows:

a. Size 1 (1.125 inch): 3,000 key changes
b. Size 2 (1.500 inch): 5,000 key changes
c. Size 3 (1.750 inch): 10,000 key changes

3.4.7.4 Class 1 padlock sets. Padlock sets of the same lot shall be operated only by their own individual keys, master keys, and grandmaster keys. The use of more than one keyway design for noninterchangeability is acceptable.

3.5 Operation. The padlock mechanism shall operate smoothly when the appropriate key is inserted and turned in the padlock. The plug shall turn without wedging the key in the keyway upon application of 2 inch-pounds of torque in releasing the shackle when tested as specified in paragraph 4.5.4.

3.6 Lubricant. Padlocks shall be lubricated with molybdenum disulfide conforming to MIL-M-7866.

3.7 Finish, coating, and plating.

3.7.1 Finish. Prior to application of coating, all exterior surfaces shall have a smooth finish. Sharp exterior edges and burrs shall be removed. The case surface shall have a smooth finish or a tumbled finish for laminated construction.

3.7.2 Coating. The exterior of the grade I and III padlock shall be coated with a clear lacquer in accordance with TT-L-26. The padlock surface shall be clean before application of the coating.

3.7.3 Plating. The steel padlock cases, steel shackles, except corrosion-resisting steel, shall be chromium plated in accordance with QQ-C-320, class 1, type II, or cadmium electroplated to conform to QQ-P-416, type II, class 1.

3.8 Padlock and key marking. Class 1, type A padlocks shall be marked as specified in MS35647. Class 1, types B and C, and all class 2 padlocks and keys shall be marked as specified in MS21313. Additionally, all padlocks shall have the name or trademark of the contractor legibly stamped, rolled or cast on each padlock in characters of not less than 0.093 inch in height. A serial number shall be legibly stamped in a distinctive manner on the keys only. The serial number shall bear no relation to the bitting of the key. The serial number shall indicate to the contractor that it pertains to a Government padlock. The markings on keys of a set shall be such as to establish them as belonging to the set (see figure 3).

3.9 Workmanship. The padlocks, keys, chains, and attachments shall be free of sharp edges, burrs, and slivers. There shall be no defects that affect serviceability or appearance.

3.10 System of measurement. The dimensions used in this specification are not intended to preclude the use of the metric system of measurement in the fabrication and production of the material, individual parts, and the finished product, provided form, fit, and function requirements are satisfied.

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 shall meet the 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.

4.1.2 Component and material inspection. Components and material shall be inspected in accordance with all the requirements specified herein and in applicable referenced documents.

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

a. First article inspection (see 4.2.1).
b. Quality conformance inspection (see 4.2.2).

4.2.1 First article inspection. The first article inspection shall be performed on seven padlocks or padlock sets or both and required keys when a first article is required (see 3.2, 6.2, and 6.4). In addition, five unbitted blank keys fitted to the cylinder key section of the sample locks shall be furnished for testing. This inspection shall include the examination of 4.4, the tests of 4.5, and the packaging inspection of 4.6. The first article may be either a first production item or a standard production item from the supplier's current inventory provided the item meets the requirements of the specification and is representative of the design, construction, and manufacturing technique applicable to the remaining items to be furnished under the contract.

4.2.2 Quality conformance inspection. The quality conformance inspection shall include the examination of 4.4 and the tests of 4.5, and the packaging inspection of 4.6. This inspection shall be performed on the samples selected in accordance with 4.3.

4.3 Sampling. Sampling and inspection procedures shall be in accordance with MIL-STD-105. The unit of product shall be one padlock or padlock set for each class, size, and style as specified. All padlocks and padlock sets offered for delivery at one time shall be considered a lot for the purpose of inspection. If an inspection lot is rejected, the contractor may rework it to correct the defects, or screen out the defective units, and resubmit for a complete reinspection. Resubmitted lots shall be reinspected using tightened inspection. If the rejected lot was screened, reinspection shall be limited to the defect causing rejection. If the lot was reprocessed, reinspection shall be performed for all defects. Rejected lots shall be separate from new lots, and shall be clearly identified as reinspected lots.

4.3.1 Sampling for examination. Examination shall be based on inspection level S-3 and an Acceptable Quality Level (AQL) of 2.5 for major defects and 4.0 for total defects expressed in terms of defects per hundred units.

4.4 Examination. Each padlock shall be examined for defects listed in table I. Each attribute within each classification of multiple defects shall constitute one defect.

TABLE I. Classification of defects.

Classification	Defect	Requirement paragraph
Major:		
101	Materials not as specified.	3.3, 3.3.1, 3.3.2, 3.3.3, 3.3.3.1, 3.4.4, 3.4.3
102	Used, rebuilt or remanufactured components, pieces, or parts incorporated in the padlocks.	3.3
103	Parts broken, split, or fractured.	3.3, 3.4
104	Contractor does not have documentation available for identification of material and material finishes (when requested).	3.3.3.3
105	Size out of tolerance.	3.4
106	Diameter of drainage hole improper size.	3.4.1
107	Chain and clevis not attached securely (when required).	3.4.3
108	Insufficient number of pin tumblers.	3.4.5
109	Method of securing locking mechanism is visible externally.	3.4.5
110	Shackle not spring actuated (except when not required).	3.4.5
111	Key can be removed when padlock is open.	3.4.5
112	Workmanship not as specified.	3.9
Minor:		
201	Amount of identical keys not as specified.	3.4.7

TABLE I. Classification of defects - continued.

Classification	Defect	Requirement paragraph
202	Quantity of master and grandmaster keys. not as specified.	3.4.7.1, 3.4.7.2
203	Identical keys not joined by wire ring.	3.4.7
204	Not lacquered or plated as applicable, except when fabricated of corrosion-resisting steel.	3.7.2, 3.7.3
205	Identification marking missing, illegible, incorrect or incomplete.	3.8

4.5 Tests.

4.5.1 Hardness test. Test for hardness of the cases, shackles, and keys shall be in accordance with ASTM E18 to determine compliance with 3.4.1, 3.4.2, and 3.4.7. No superficial hardness test shall be substituted. Three readings on each item shall be taken. Any nonconformance shall constitute failure of this test.

4.5.2 Picking and bypassing. The padlock shall be tested with the padlock shackle locked to a hasp fastened to a solid upright member, to determine compliance with 3.4.5 and 3.4.6. Picking and bypassing shall be restricted to manual methods including shim or sneakers used against the shackle or lock cylinder. The padlock dead-bolt end shall withstand any pressure exerted by shims or sneakers for the elapsed time as specified in 3.4.5.

4.5.3 Key integrity test. Padlocks shall be tested for key integrity by using all the keys from all the locks in the sample. The key shall be inserted into each locked sample lock to full depth. Keys shall be manipulated by applying torsional pressure as they are slowly withdrawn from the keyway. Any padlock that can be opened by a key other than a key designated to operate the lock shall constitute failure of this test in compliance with 3.4.7.

4.5.4 Operational test. The padlock shall be operated for not less than 1,000 cycles prior to performing the two phases of this test. A cycle consists of inserting the proper key into a locked padlock, turn the key to unlock the padlock, pull the padlock open, lock the padlock, and remove the key. The first phase shall include inserting the key to full depth, opening the lock, and attempting to remove the key while the shackle is in the open position to determine compliance with 3.4.5. For the second phase, the key shall be inserted into each sample lock to full depth. The padlock shall show

no indication of wedging of the key in the keyway or the need for more than 2 inch-pounds of torque to turn the plug and unlock the shackle in compliance with 3.5. Each padlock shall withstand each phase of the test for a not less than one minute.

4.5.5 Tensile test. One padlock or one padlock from a padlock set for each class, size, and style provided shall be subjected to the tensile test. The body of the padlock shall be held in a device bearing against the top surface of the case without interfering with the shackle (see figure 4). The required tension shall be applied at the rate of 200 pounds per minute along the vertical center line of the padlock so as to put a direct and equal tension on each leg of the shackle. Shackles in the assembled padlock shall resist tension loads as required in 3.4.2. Pulling any shackle out of the locked position or the appearance of flaws or cracks on the shackle or case shall constitute failure of this test.

4.5.6 Plug security test. The plug of the padlock shall be subjected to impact, jarring, torquing, and prying to determine compliance with 3.4.5. Removal of the plug from the locked padlock without evidence of mutilation shall constitute failure of this test. Tools shall be limited to plastic or rawhide hammers not over 12 ounces in weight; torque levers and pry bars not over 12 inches in length.

4.6 Inspection of packaging. Except when industrial packaging is specified, the sampling and inspection of the preservation and interior package marking shall be in accordance with groups A and B quality conformance inspection requirements of MIL-P-116. The sampling and inspection of the packing and marking for shipment and storage shall be in accordance with the quality assurance provisions of the applicable container specification shown in section 5 and the marking requirements of MIL-STD-129. The inspection of industrial packaging shall be as specified in the contract (see 6.2).

5. PACKAGING

5.1 Preservation and packaging. The level of preservation and level of packaging shall be level A or C, as specified (see 6.2).

5.1.1 Level A.

5.1.1.1 Unit containers. Each padlock, including its matching key(s) shall be preserved in accordance with submethod IC-2 of MIL-P-116. The snug-fitting carton or box shall comply with PPP-B-566 or shall be the contractor's standard commercial carton or box. Closure of the carton or box shall be with reinforced tape conforming to PPP-T-60. The sealed bag enclosing the carton or box shall be as specified for the submethod, except that the bag shall be style 2.

5.1.1.2 Intermediate containers, class 1, type A padlocks, not in sets. Ten class 1 padlocks, not in sets, not master keyed and in unit containers with keys as specified in 5.1.1.1, shall be placed in one intermediate container. The container shall be a close-fitting box conforming to PPP-B-636, type CF, class-weather-resistant, variety SW, grade as applicable.

5.1.1.3 Set containers or group containers, class 1, type B and type C padlock sets. Padlocks for class 1 padlock sets shall be consolidated together, in the quantities required as a set, into a set container. When a padlock set consists of a series of master keyed groups, each group within that set, including the specified master keys for the group, shall be placed in a group container prior to their placement into the set container. Group or set containers for less than 10 padlocks shall comply with the requirements of PPP-B-566, variety 2. Group or set containers for 10 or more padlocks shall comply with the requirements of PPP-B-636, type CF, class weather-resistant, variety and grade as applicable to the weight and cube. Master keys and, as applicable, grandmaster keys, in the quantities required (see 3.4.7.1 and 3.4.7.2), shall be sealed in a plastic or paper bag or envelope. The envelope with the master key(s) or the grandmaster key(s) for a group or set shall be conspicuously marked, properly identified and positioned beneath the inner flaps of the applicable group or set container.

5.1.1.4 Set containers, class 2 padlock sets. Padlocks for class 2 padlock sets shall be consolidated together, in the quantities required as a set into a set container. The keys for the class 2 sets shall be included with the sets in the following manner.

a. When the number of keys for the class 2 set is less than the quantity of padlocks in the set, the required number of keys shall be sealed in a plastic or paper bag or envelope and then conspicuously identified and positioned inside the set container.

b. When the number of keys for the class 2 set is the same as the quantity of padlocks in the set, one key shall be included with each padlock in the unit container specified in 5.1.1.1.

c. When the number of keys for the class 2 set is greater than the quantity of padlocks in the set, one key shall be included with each padlock in the unit container specified in 5.1.1.1, and the balance of the keys shall be sealed in a plastic or paper bag or envelope and then conspicuously identified and positioned inside the set container.

Set containers for less than 10 padlocks shall comply with the requirements of PPP-B-566, variety 2. Set containers for 10 or more padlocks shall comply with the requirements PPP-B-636, type CF, class weather-resistant, variety and grade as applicable to the weight and cube.

6.3 Data requirements. When this specification is used in an acquisition and data are required to be delivered, the data requirements 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 27.410.6 (DD Form 1423) are invoked and the DD Form 1423 is not used, the data shall be delivered by the contractor in accordance with the contract or purchase order requirements.

6.4 First article. When a first article inspection is required, the item will be tested and should be a first article sample or it may be a standard production item from the contractor's current inventory as specified in 4.2.1. The first article should consist of seven padlocks or padlock sets or both with required keys. In addition, five unbitted blank keys fitted to the cylinder key section of the sample locks should be furnished. The contracting officer should include specific instructions in acquisition documents regarding arrangements for examination, test, approval of the 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. The contracting officer should contact the Assistant to the DOD Program Manager for Physical Security, Naval Civil Engineering Laboratory (Code L56), Port Hueneme, CA 93043-5003, regarding testing and disposition of the test samples.

6.5 SPN. SPN's were developed to identify items covered by this specification for cataloging purposes. The SPN consists of this specification identifier (M17802) and the SPN code number (see 1.2.1).

Example:

M17802 - 1 - B - 2 - B

Specification identifier

Grade

Class/type

Size

Style

The above identifies a grade I (brass or bronze shackle and case), class 1; type B (master keyed set), size 2 (1-1/2 inch), style B (long shackle) padlock set.

5.1.2 Level C. The padlocks shall be preserved in accordance with ASTM D3951 and packaging into groups or sets as specified. The containers required shall be in accordance with the contractor's standard commercial practice.

5.2 Packing. Packing shall be level A or C as specified (see 6.2).

5.2.1 Level A. Padlocks, preserved as specified in 5.1.1, shall be packed in a close-fitting box conforming to PPP-B-601, overseas type, style optional, or PPP-B-621, class 2, style optional. The gross weight of each box shall be not greater than 200 lbs. Box closure and strapping shall be in accordance with the applicable box specification or the appendix thereto except that the strapping shall be flat and the finish type B.

5.2.2 Level C. Padlocks, preserved as specified in 5.1.2, shall be packed in accordance with ASTM D3951 except that gross weight of each shipping container shall be not greater than 200 lbs.

5.3 Marking. In addition to any special or other identification marking specified in the contract or purchase order (see 6.2), each container shall be marked in accordance with MIL-STD-129.

5.3.1 Key assignment. Each bag or envelope of keys, each unit container, each group container, and set containers for class 1 and class 2 padlocks shall be marked to show the proper key assignments.

6. NOTES

6.1 Intended use. This specification covers padlocks for general, low military security, and for other applications, where a primary means of security is required. Padlocks contained within this specification are not intended for use where high security is required.

6.2 Ordering data. Acquisition documents should specify the following:

a. Title, number, and date of this specification.
b. Grade, class, type, size, style, or SPN required (see 1.2 and 1.2.1).
c. When a first article is required for inspection and approval (see 4.2.1).
d. When attached chain and clevis is required (see 3.4.3).
e. When a spring is not required to actuate the shackle (see 3.4.5).
f. Quantity of keys required for class 1 padlock sets and quantity of keys required for class 2 padlock sets (see 3.4.7).
g. Quantity of master keys, if other than as specified (see 3.4.7.1).
h. Quantity of grandmaster keys, if other than as specified (see 3.4.7.2).
i. Inspection method of industrial packaging (see 4.6).
j. Level of preservation and level of packaging required (see 5.1).
k. Level of packing required (see 5.2).
l. When special marking is required (see 5.3).

6.6 Cross reference of classifications. A cross reference of old to new classifications resulting from specification revisions is as follows:

MIL-P-17802B	MIL-P-17802C	MIL-P-17802D	MIL-P-17802E
None	Grade I	Grade I	Grade I
None	Grade II	Grade II	Grade II
None	None	Grade III	Grade III
Class 1	Class 1	Class 1	Class 1
None	Type A	Type A	Type A
None	Type B	Type B	Type B
None	Type C	Type C	Type C
Class 2	Class 2	Class 2	Class 2
None	Refer to MS21313 and MS35647	Refer to MS21313 and MS35647	Sizes
None	None	None	Size 1
None	None	None	Size 2
None	None	None	Size 3
Style A	Style A	Style A	Style A
Style B	Style B	Style B	Style B

6.7 Subject term (key word) listing.

Grandmaster keyed
Individually keyed
Key operated
Low security
Master keyed
Padlocks
Regular (open) shackle

6.8 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 - GL
Navy - YD
Air Force - 99

Review activities:
Army - AR
Navy - SH
Air Force - 82
DLA - IS

User activities:
Army - AL
Navy - MC

Civil Agency Coordinating Activity:
GSA-7FXEE

Preparing activity:
Navy - YD

(Project 5340-1728)

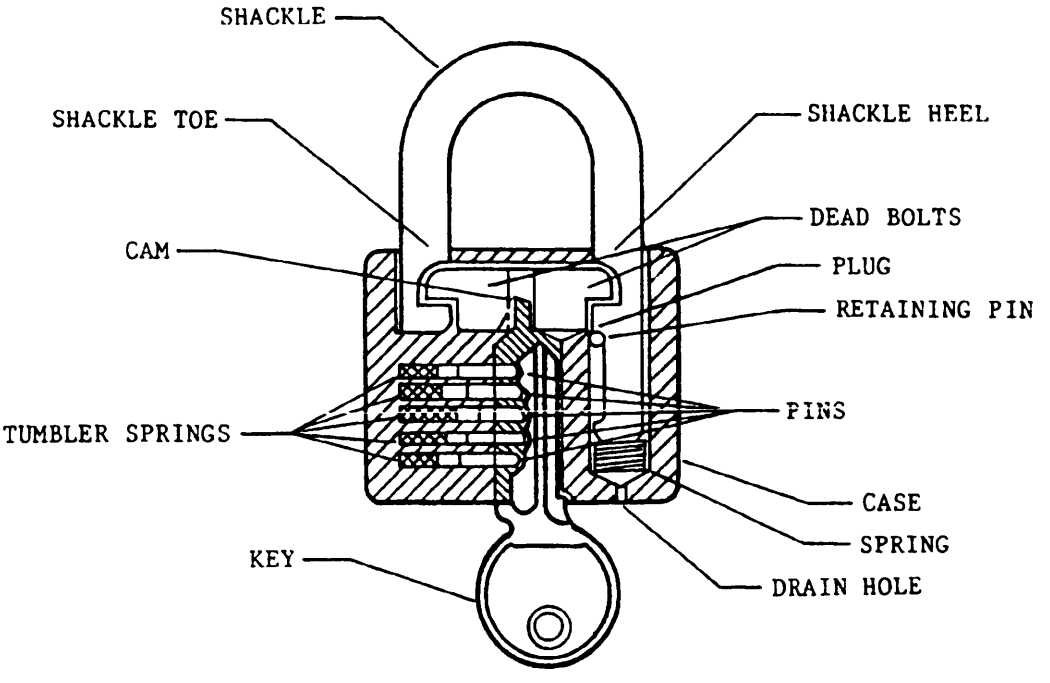


FIGURE 1. Padlock component nomenclature.

UPPER CROSS-SECTION VIEWS OF DEAD BOLT LOCKING

UNLOCKED POSITION

LOCKED POSITION

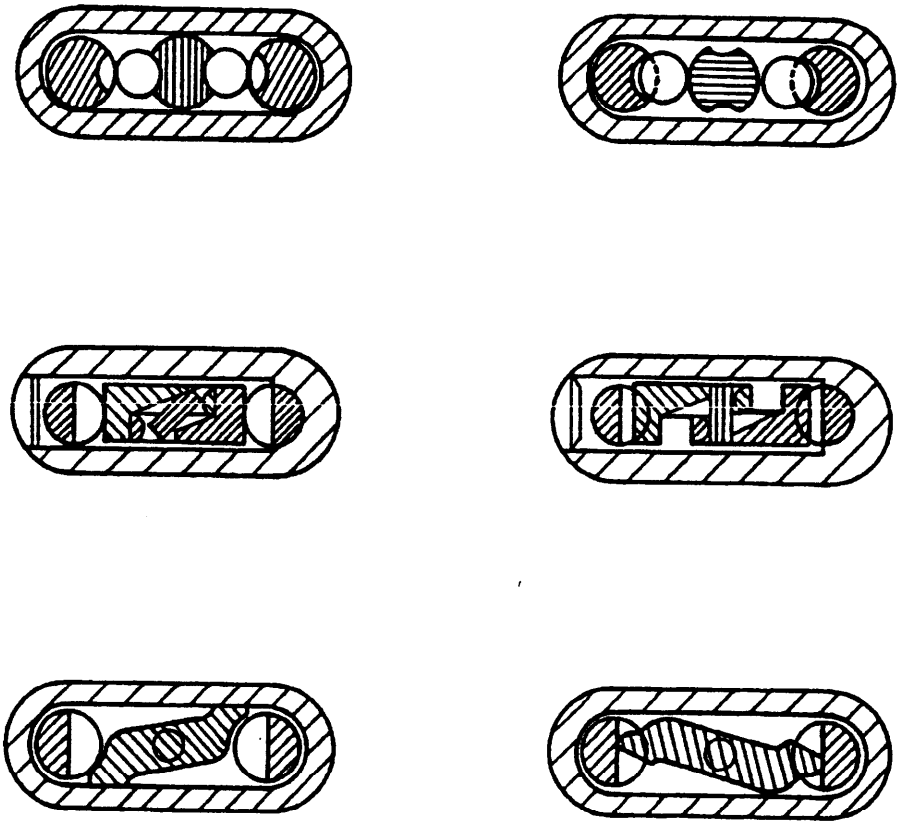
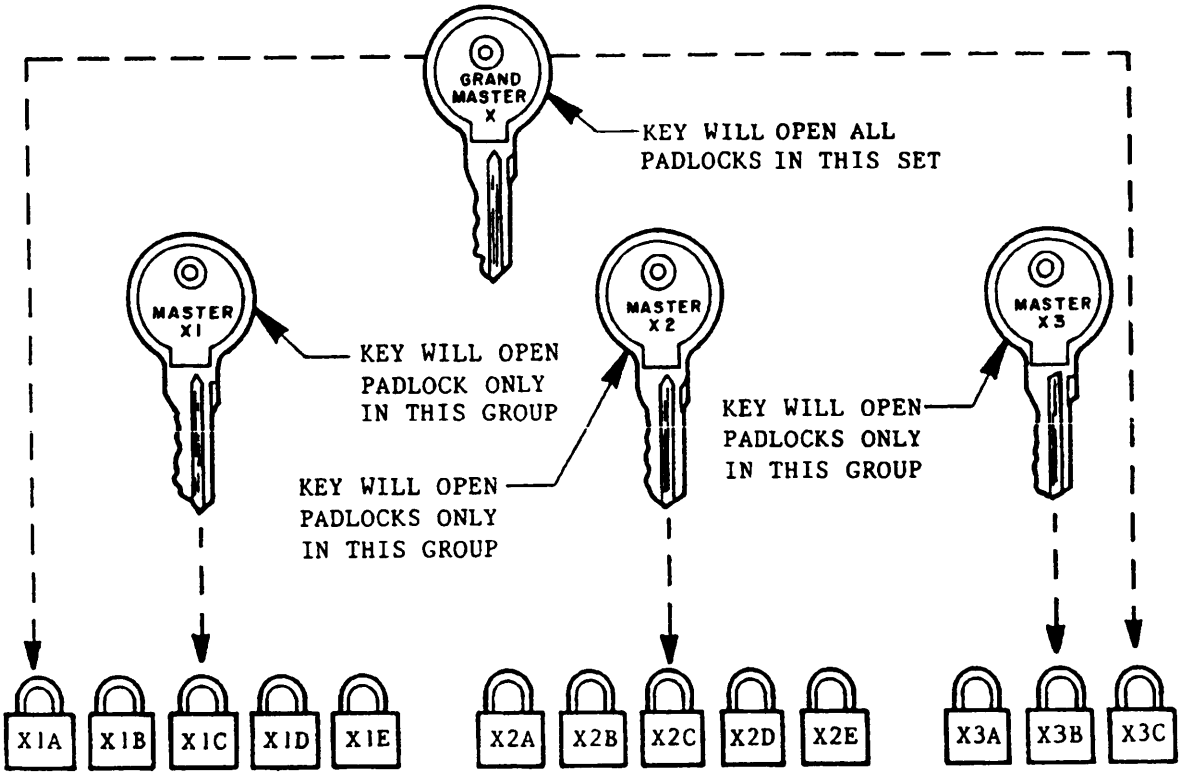


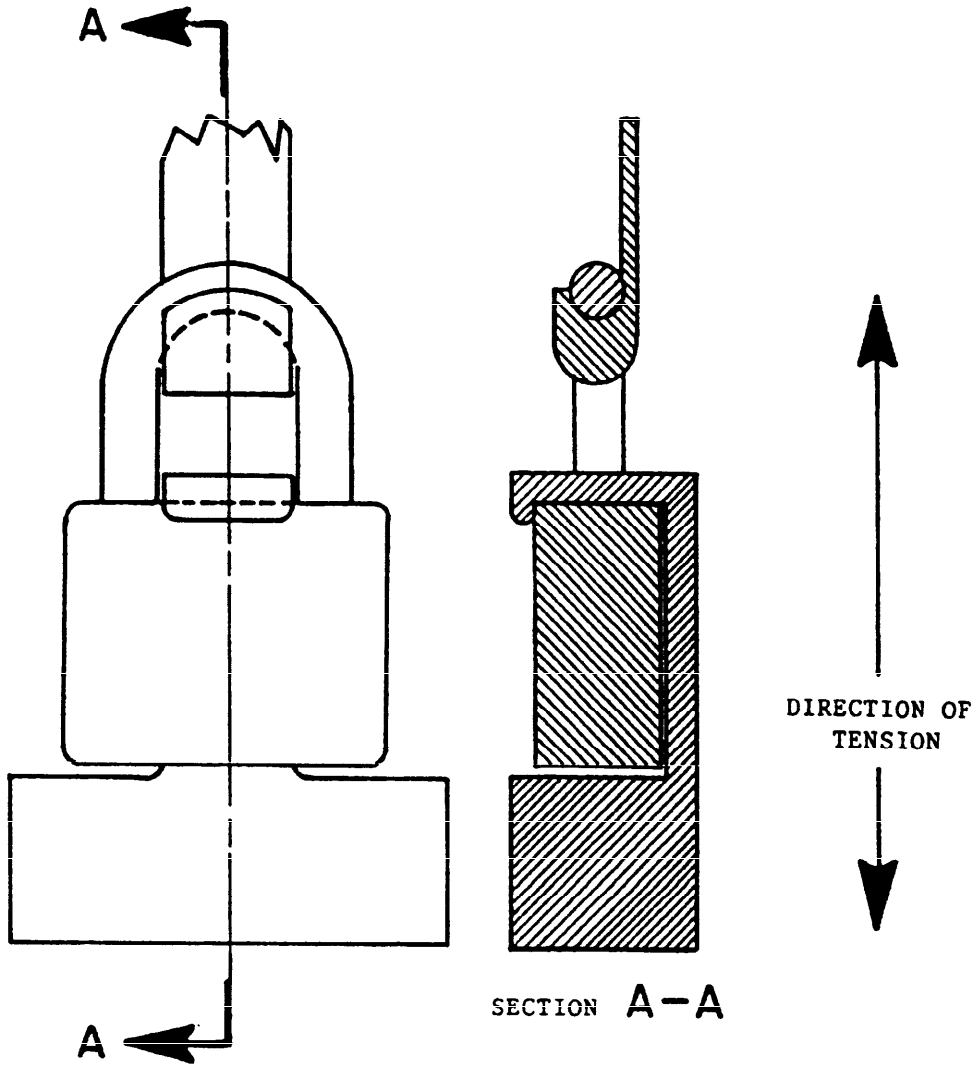
FIGURE 2. Examples of dead bolt locking.

SET OF 13 PADLOCKS CONTAINING 3 GROUPS



INDIVIDUAL KEYS SHALL BE STAMPED WITH THE SAME GROUP NUMBER AS ON THE APPLICABLE PADLOCKS

FIGURE 3. Example of padlock set identification.



NOTES:

1. VARIOUS TYPES OF GRIPPING DEVICES MAY BE USED TO TRANSMIT THE MEASURED LOAD APPLIED BY THE TESTING MACHINE TO THE TEST SPECIMAN.
2. THE REQUIRED TENSION LOAD SHALL BE APPLIED SLOWLY ALONG THE VERTICAL CENTER LINE OF THE PADLOCK SO AS TO PUT A DIRECT AND EQUAL TENSION IN EACH SHANK OF THE SHACKLE.
3. THE GRIPPING DEVICE SHALL NOT DISTORT THE SHACKLE WHEN TENSION IS APPLIED.

FIGURE 4. Example of tension load application.

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.

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STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

(See Instructions – Reverse Side)

1. DOCUMENT NUMBER	2. DOCUMENT TITLE
MIL-P-17802E	PADLOCKS AND PADLOCK SETS, LOW SECURITY, KEY OPERATED, REGULAR (OPEN) SHACKLE

3a. NAME OF SUBMITTING ORGANIZATION	4. TYPE OF ORGANIZATION *(Mark one)*
	☐ VENDOR
b. ADDRESS *(Street, City, State, ZIP Code)*	☐ USER
	☐ MANUFACTURER
	☐ 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)*

(TO DETACH THIS FORM, CUT ALONG THIS LINE.)

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PREVIOUS EDITION IS OBSOLETE.