

FF-H-106C/GEN  
July 19, 1974  
SUPERSEDING  
Int. Fed. Spec. FF-H-001062 (GSA-FSS)  
August 21, 1967 and  
Fed. Spec. FF-H-106A  
November 23, 1948  
(See 6.11)

## FEDERAL SPECIFICATION

### HARDWARE, BUILDERS'; LOCKS AND DOOR TRIM: GENERAL SPECIFICATION FOR

This specification was approved by the Commissioner, Federal Supply Service, General Services Administration, for use of all Federal agencies.

#### 1. SCOPE AND CLASSIFICATION

1.1 Scope. The hardware covered by this specification is that generally classified as builders' locks and door trim.

#### 1.2 Classification.

1.2.1 Series, types, grades and functions. Locks and door trim shall be of the series, types, grades and functions described in American National Standards Institute (ANSI) A156.2 and A156.6, and in detail specifications, as specified (see 6.2).

#### 2. APPLICABLE DOCUMENTS

2.1 The following documents, of the issue in effect on date of invitation for bids or request for proposal form a part of the specification to the extent specified herein.

##### Federal Specification

PPP-H-1581 - Hardware (Fasteners and Related Items), Packaging and Packing for Shipment and Storage of

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Federal Standard

Fed. Std. No. 123 - Marking for Domestic Shipment (Civil Agencies)

(Activities outside the Federal Government may obtain copies of Federal Specifications, Standards, and Handbooks as outlined under General Information in the Index of Federal Specifications and Standards and at the prices indicated in the Index. The Index, which includes cumulative monthly supplements as issued, is for sale on a subscription basis from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

(Single copies of this specification and other Federal Specifications required by activities outside the Federal Government for bidding purposes are available without charge from Business Service Centers at the General Services Administration Regional Offices in Boston, New York, Washington, DC, Atlanta, Chicago, Kansas City, MO, Fort Worth, Denver, San Francisco, Los Angeles, and Seattle, WA.

(Federal Government activities may obtain copies of Federal Specifications, Standards, and Handbooks, and the Index of Federal Specifications and Standards, from established distribution points in their agencies.)

Military Standards

MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes  
MIL-STD-129 - Marking for Shipment and Storage

(Copies of Military Specifications and Standards, required by suppliers in connection with specific procurement functions, should be obtained from the procuring activity or as directed by the contracting officer.)

2.2 Other publications. The following documents form a part of this specification to the extent specified herein. Unless a specific issue is identified, the issue in effect on date of invitation for bids or request for proposal shall apply.

American National Standards Institute, Inc. (ANSI)

A156.2 - Locks and Lock Trim  
A156.6 - Architectural Door Trim

(Application for copies should be addressed to the American National Standards Institute, 1430 Broadway, New York, NY 10018.)

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Builders' Hardware Manufacturers' Association (BHMA)

1301 - Material and Finishes Standards

(Application for copies should be addressed to the Builders' Hardware Manufacturers' Association, 60 East 42nd Street, New York, NY 10017.)

National Motor Freight Traffic Association, Inc. Agent

National Motor Freight Classification

(Application for copies should be addressed to the American Trucking Associations, Inc., Tariff Order Section, 1616 P Street, N.W., Washington, DC 20036.)

Uniform Classification Committee, Agent

Uniform Freight Classification

(Application for copies should be addressed to the Uniform Classification Committee, Room 1106, 222 S. Riverside Plaza, Chicago, IL 60606.)

Technical society and technical association specifications and standards are generally available for reference from libraries. They are also distributed among technical groups and using Federal agencies.

### 3. REQUIREMENTS

3.1 Specification sheets. The individual item requirements shall be as specified herein and in accordance with the applicable specification sheets.

#### 3.2 Standards compliance.

3.2.1 Locks. Except as otherwise specified herein, locks shall conform to the requirements of ANSI A156.2.

3.2.2 Door trim. Except as otherwise specified herein, door trim shall conform to the requirements of ANSI A156.6.

3.3 Standard product. The locks and door trim shall, as a minimum, be in accordance with the requirements of this specification and shall be the manufacturer's standard 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

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hardware being furnished. Standard commercial product is a product which has been or will be sold on the commercial market through advertisements or manufacturer's catalogs or brochures, and represents the latest production model(s).

3.4 First article. When specified (see 6.2), the contractor shall furnish a lock and door trim of each type ordered, for first article inspection and approval (see 4.2.1 and 6.4).

3.5 Interchangeability. All removable items and replacement parts of similar equipment shall be interchangeable with corresponding items or parts and not require hand or machine fitting.

3.6 Material. Material shall be as specified herein. Material not definitely specified shall be of the quality normally used by the manufacturer in commercial practice.

3.7 Trim. Unless otherwise specified (see 6.2), trim shall be of a commercial plain design. Items required to be of "modern" design shall be of a commercial decorative design or of a shape other than the plainest design otherwise furnished by the manufacturer and regularly cataloged by him. All trim items shall have straight, beveled or smoothly rounded sides, corners, and edges.

3.7.1 Escutcheons. When required (see 6.2), mortise locks shall be furnished with escutcheons. Minimum size shall be 7 inches x 2-1/4 inches. Bearing minimum length shall be 1/4 inch. Escutcheons shall be cut to suit lock requiring cylinder or key.

3.8 Lock sets. Sets shall consist of lock with trim. Set numbers for lock sets specified in detail specifications are formed by combining type numbers with trim numbers, i.e., lock set 121A-18.

3.9 Hardware types specified in detail specifications (see 6.2 and detail specifications).

3.9.1 Dimensions. The dimensions given herein are descriptive of the desired types and sizes, and shall be considered approximate; however, if dimensions are not as given in the detail specifications herein, the article shall be a full commercial equivalent of articles that meet all requirements. Minimum dimensions are given to the nearest 1/64 inch.

3.9.2 Illustrations. The illustrations shown in detail specifications herein are descriptive of the desired types, and shall not be construed as showing required designs; however, items of designs other than as illustrated and described shall be full commercial equivalents of those shown.

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3.9.3 Materials. Bolts, front, and strikes shall be of brass, bronze, or stainless steel. The case and interior working parts shall be of brass, bronze, steel, iron, monel, stainless steel, nylon, acetal plastic, or hard anodized aluminum. The cylinder shall be of brass, bronze, or stainless steel, with two white bronze keys. When specified (see 6.2), aluminum keys may be furnished in lieu of white-bronze keys. Aluminum keys shall have a hardness of not less than Rockwell "B" 80.

3.10 Lock fronts or plates. Unless otherwise specified (see 6-2), lock fronts or face plates shall be flat. When beveled fronts are specified, the bevel shall be 1/8 inch in 2 inches. When rounded fronts are specified, the radius shall be 4 inches. When rabbeted fronts are specified, the depth of the rabbet shall be 1/2 inch. Basket of the locks with rabbeted front shall be measured on the short side.

3.11 Armored fronts. When specified (see 6.2), armored fronts shall be provided in lieu of solid fronts on locks. The base plate of armored fronts may be steel or bronze.

3.12 Strikes. Unless otherwise specified (see 6.2), strikes for locks and latches for doors with wood frames shall be plain. Strikes for latches shall have the lip either curved or flat. Template strikes shall be provided as specified (see 6.2), for all locks and latches to be installed in doors to be hung in hollow metal frames. Projecting corners of strikes shall be rounded.

3.13 Spindles. Triplex spindles may be furnished in lieu of threaded spindles.

3.14 Tumblers. All tumblers in bit key and cylinder locks shall be fully effective, and shall not permit operation of the lock bolt until each tumbler is moved into its proper position, except for such minor variations in position as may result from ordinary commercial manufacturing tolerances.

3.15 Cylinders. Cylinders for cylinder locks shall have pins in five or more pin tumbler cavities. Keyway shall be paracentric, that is, shall have longitudinal ribs, at least one of which on each side of the keyway shall project to or beyond the center line of the keyway. Cylinders other than those in knobs shall not be less than 1-1/8 inch in diameter back of the head. When specified (see 6.2), cylinders shall be of a type which are removable from the face of the retainer housing.

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3.16 Duplicate keys and change numbers. Information on noncommercial change numbers, and duplicate keys made therefrom, shall not be furnished except where proper responsibility for the locks and keys or change numbers is clearly indicated.

3.17 Master keys. When specified (see 6.2), cylinder locks and three-tumbler bit key locks shall be master keyed. Unless otherwise specified (see 6.2), three master keys shall be furnished with each group of master keyed cylinders.

3.18 Fastenings. Hardware furnished under this specification shall be complete with all screws, bolts, etc., necessary for proper application. Such fastenings shall be of suitable size and type and shall harmonize with the hardware as to material and finish.

3.19 Finishes. Exposed surfaces of hardware shall have one of the applicable standard finishes as specified (see 6.2). As far as practicable, finishes as defined in BHMA 1301 should be confined to bright-brass, clear coated (BHMA 605), satin brass, clear coated (BHMA 606), satin bronze, clear coated (BHMA 612), oxidized satin bronze, oil rubbed (BHMA 613), bright chromium plated (BHMA 625), satin chromium plated (BHMA 626), satin aluminum, clear anodized (BHMA 628), bright stainless steel (BHMA 629), or satin stainless steel (BHMA 630).

### 3.20 Marking.

3.20.1 Marking of locks. The name of the manufacturer, or a trademark by which he can be readily identified, shall be legibly marked on the lock where it can be seen after installation. When specified (see 6.2), key change number or symbol shall be legibly marked on removable cylinders.

3.20.2 Marking of keys. Unless otherwise specified (see 6.2), key change numbers for cylinders shall be stamped on each key. When specified (see 6.2), each key shall be legibly stamped with the words "U.S. Property--do not duplicate". Key change numbers shall provide sufficient information for replacement of the key by the manufacturer.

3.21 Lubrication. Prior to shipment, all friction points on moving parts not self lubricating, shall be lubricated with a graphite, silicone, or similar type lubricant to insure freedom of movement under extreme conditions of temperature and humidity. The lubricant shall be of a type that will not leak out of the mechanism to cause stains or damage to surrounding surfaces.

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3.22 Workmanship. All hardware shall be free from imperfections and defects which affect its appearance, durability, and serviceability. All finished parts of hardware that are to be set flush shall have accurately machined, true edges. Edges of unfinished steel and iron and unpolished work need not be machine finished, but shall be smooth and reasonably true.

#### 4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or order, the supplier 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 Inspection of materials and components. In accordance with 4.1, the supplier is responsible for insuring that materials and components used were manufactured, examined, and tested to the extent specified, in accordance with the requirements of referenced subsidiary specifications and standards.

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. First article inspection shall be performed on one of each type lock and door trim ordered when a first article sample is required (see 3.4). This inspection shall include the examination of 4.5 and the tests of 4.6.1 and 4.7. Failure of the first article to pass the examination or any of the tests shall be cause for rejection. The first article may be a standard production item from the supplier's current inventory, provided the unit meets the requirements of the specification and is representative of the design, construction, and manufacturing technique applicable to the remaining units to be furnished under the contract.

4.2.2 Quality conformance inspection. Quality conformance inspection shall be performed on each type lock and door trim selected in accordance with 4.4. This inspection shall include the examination of 4.5 and the tests of 4.6.2 and 4.7.

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4.3 Inspection lot. All units of the same series, type, grade, and function, offered to the Government at one time shall be considered a lot, for purposes of inspection. A sample unit shall be one complete lock and door trim.

#### 4.4 Sampling.

4.4.1 Sampling for examination. A random sample of locks and door trim shall be selected from each lot offered to the Government in accordance with MIL-STD-105 at inspection level II. The acceptable quality level shall be 1.5 percent defective for major defects and 4.0 percent defective for minor defects.

4.4.2 Sampling for tests. A random sample of locks and door trim shall be selected from each lot offered to the Government in accordance with MIL-STD-105 at inspection level S-4. The acceptable quality level shall be 1.5 percent defective.

4.5 Examination. Each lock and door trim selected in accordance with 4.4.1 shall be examined to verify compliance with this specification. Examination shall be conducted as specified in Table I.

Table I. Classification of defects

Categories	Defects
Major:	
101	Series, type, grade, or function not as specified
102	Dimensions not as specified
103	Sharp or burred edges
104	Components missing
105	Components damaged
106	Flaking, peeling, or blistering of plating
107	Finish not as specified
Minor:	
201	Finish not uniform
202	Locks and keys not marked as specified
203	Polished finish scratched or not uniform



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## 4.6 Tests.

4.6.1 First article. First article lock and door trim shall be tested in accordance with ANSI A156.2 and A156.6 as applicable. A certificate of compliance, accompanied by certified copies of reports of tests either conducted in the manufacturer's plant and certified by an independent testing laboratory or conducted in an independent laboratory, will be accepted as evidence that the hardware has passed the required tests. When locks and door trim have been previously tested, the test requirements for the first article may be met by submittal of the certified test data from previous first article tests, in accordance with this specification, provided the design, construction, and manufacturing techniques have not been changed, and the supplier provides a certified statement to that effect.

4.6.2 Quality conformance. Each lock selected in accordance with 4.4.2 shall, as applicable, be subjected to the operational tests, strength tests, and when specified (see 6.2), the cycle tests as specified in ANSI A156.2. Any lock failing to meet the qualification requirements and performance test values, as applicable, shall be rejected.

4.7 Performance tests for finishes. Finishes shall conform to the performance requirements specified in ANSI A156.2 and A156.6 as applicable.

4.8 Inspection of preparation for delivery. Preparation for delivery requirements of the locks and door trim shall be inspected to determine conformance with the applicable requirements of section 5 of this specification.

## 5. PREPARATION FOR DELIVERY

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

5.1.1 Level A. The locks and door trim shall be preserved and packaged in accordance with the applicable level A requirements of PPP-H-1581.

5.1.2 Level C. The locks and door trim shall be preserved and packaged in accordance with the supplier's standard practice.

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

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5.2.1 Level A. The locks and door trim shall be packed in accordance with the applicable level A requirements of PPP-H-1581, except that fiberboard boxes shall not be used.

5.2.2 Level B. The locks and door trim shall be packed in accordance with the applicable level B requirements of PPP-H-1581.

5.2.3 Level C. The locks and door trim shall be packed in a manner which will insure arrival at destination in satisfactory condition and be acceptable to the carrier at lowest rates. Containers and packing shall comply with Uniform Freight Classification rules or National Motor Freight Classification rules.

5 3 Marking. (See 6.2.)

5.3.1 Civil agencies. In addition to markings required by the contract or order, the interior packages and shipping containers shall be marked in accordance with Fed. Std. No. 123.

5.3.2 Military activities. In addition to markings required by the contract or order, the interior packages and shipping containers shall be marked in accordance with MIL-STD-129.

6. NOTES

6.1 Intended use. The locks and door trim covered by this specification is intended for use in general construction applications.

6.2 Ordering data. Purchasers should select the preferred options offered herein and include the following data in procurement documents:

6.2.1 Procurement requirements.

- (a) Title, number, and date of this specification.
- (b) Series, type, grade and function of hardware required (see 1.2, 3.9 and detail specifications).
- (c) When a first article is required for inspection and approval (see 3.4).
- (d) Trim design, if other than specified (see 3.7).
- (e) When escutcheons are required (see 3.7.1).
- (f) When aluminum keys may be furnished (see 3.9.3).
- (g) Type of lock front or face plate if other than specified (see 3.10).
- (h) When armored fronts are required (see 3.11).

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- (i) Type of strike if other than specified, and when template strikes are required (see 3.12).
- (j) When removable cylinders are required (see 3.15).
- (k) When master keys are required and number of keys if other than specified (see 3.17).
- (l) Type of finish required (see 3.19).
- (m) Marking of locks and marking of keys (see 3.20.1 and 3.20.2).
- (n) When cycle test is required (see 4.6.2).
- (o) Level of preservation and packaging and level of packing required (see 5.1 and 5.2).
- (p) Marking required (see 5.3).

6.2.2 Contract data requirements. When this specification is used in a procurement which incorporates a DD Form 1423 and invokes the provisions of paragraph 7-104.9(n) of the Armed Services Procurement Regulation, the data requirements identified below will be developed as specified by an approved Data Item Description (DD Form 1664) and delivered in accordance with the Contract Data Requirements List (DD Form 1423) incorporated into the contract. When the provisions of ASPR 7-104.9(n) are not invoked, the data specified below shall be delivered in accordance with the contract requirements. Deliverable data required by this specification is cited in the following paragraphs.

Paragraph	Data Requirement	Applicable DD 1664
4.6.1	Certificate of Compliance	DI-E-2121

(Copies of Data Item Descriptions required by contractors in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

6.3 Specification sheets. The following detailed specification sheets form a part of and are applicable to this specification:

FF-H-106/1	Hardware, Builders'; Locks and Door Trim: Cylinder Entrance Door Locks, Types 121A and 122A
FF-H-106/2	Hardware, Builders'; Locks and Door Trim: Cylinder Entrance Door Locks, Types 123A and 123B
FF-H-106/3	Hardware, Builders'; Locks and Door Trim: Letter Box Plates

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6.4 First article. When a first article is required, it shall be tested and approved under the appropriate provisions of paragraph 7-104.55 of the Armed Services Procurement Regulation. The first article may be a standard production item from the manufacturer's current inventory. The first article should consist of one unit. The contracting officer should include specific instructions in all procurement instruments, regarding arrangements for examinations, test and approval of the first article.

6.5 Classification cross-reference. Classification cross-reference, as pertains to locks and lock sets is furnished for information purposes only. When ordering hardware items, other than those listed in the detail specifications, the procuring agency should use the series, type, grade, and function classifications available in ANSI A156.2. Door trim is available in ANSI A156.6 by product type. Type numbers listed in the following tables are only those equal to items previously listed in FF-H-00106b. Many other types are available in ANSI A156.2 and A156.6, as applicable, depending on individual needs and applications.

Table II. Classification cross-reference (locks)

Classification FF-H-00106b	Nearest corresponding ANSI A156.2 designation	
Types	Grade	Function
85A - Front door lock.	3	F08-Front door lock.
85B - Latch and dead bolt.	3	F13-Dormitory or exit lock.
85C - Latch and dead bolt.	3	F14-Store door lock.
85E - Office lock.	3	F04-Entry lock.
85EW - Office lock.	3	F07-Storeroom or closet lock.
86A - Front door lock.	2	F08-Front door lock.
86B - Latch and dead bolt.	2	F13-Dormitory or exit lock.
86BR - Latch and dead bolt.	2	F13-Dormitory or exit lock. Rabbeted front.
86C - Latch and dead bolt.	2	F14-Store door lock.
86CR - Latch and dead bolt.	2	F14-Store door lock. Rabbeted front.
86E - Office lock.	2	F04-Entry lock.
86EW - Office lock.	2	F07-Storeroom or closed lock.
86F - Exit door lock.	2	F12-Dormitory or exit lock.
86FW - Exist door lock.	2	F13-Dormitory or exit lock.
86G - Apartment entrance, office door, and public toilet lock.	2	F09-Apartment, exit or public toilet lock.
86H - Hotel room lock.	2	F15-Hotel guest room lock.
86J - Classroom lock.	2	F05-Classroom lock.
86L - Bathroom lock.	2	F02-Privacy, bedroom or bath lock.
86M - Communicating door lock.	2	F03-Communicating lock.

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Table II. (continued)

86N - Knob latch.	2	F01-Passage or closet latch.
86P - Deadlock.	2	F17-Dead lock.
86S - Deadlock.	2	F18-Dead lock.
86T - Deadlock.	2	F16-Dead lock.
87E - Office lock.	1	F04-Entry lock.
87G - Apartment and public building entrance lock.	1	F09-Apartment, exit or public toilet lock.
87N - Knob latch.	1	F01-Passage or closet latch.
90A, 98A-Entrance or office door lock.	1	F40-Entrance or storeroom lock.
90B, 98B-Entrance or office door lock.	1	F41-Entry lock.
90C, 98C-Entrance, office building and lavatory door lock.	1	F45-Apartment, exit or public toilet lock.
90D, 98D-Storeroom or exit door lock.	1	F44-Storeroom or closet lock.
90E, 98E-Service station door lock.	1	F40-Entrance or storeroom lock.
90F, 98F-Communicating door lock.	1	F46-Store door lock.
90G, 98G-Store door lock.	1	F46-Store door lock.
90H, 98H-Hotel guest room door lock.	1	F48-Hotel guest room, club house, dormitory or apartment entrance lock.
90L, 98L-Bath or bedroom privacy room lock.	1	F37-Privacy, bedroom or bath lock.
90M, 98M-Communicating door lock.	1	F39-Communicating lock.
90N, 98N-Passage or closet door latch.	1	F36-Passage or closet latch set.
90P, 98P-Patio or inner office door lock.	1	F38-Patio or privacy lock.
90R, 98R-Classroom door lock.	1	F42-classroom lock.
150A, 150YA-Entrance door lock.	3	F81-Entrance or store room lock.
150B, 150YB-Entrance door lock.	3	F82A and F82B-Entry lock.
150L, 150YL-Bath or bedroom privacy door lock.	3	F76A and F76B-Privacy, bedroom or bath lock.
150N, 150YN-Passage or closet door latch.	3	F75-Passage or closet latch.
150P, 150YP-Patio door lock.	3	F77A and F77B-Patio or privacy lock.
150Q, 150YQ-Patio door lock.	3	F83-Exit lock.

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Table II. (continued)

159A, 160A, 161A-Entrance or office door lock.	1,2,3	F81-Entrance or storeroom lock.
159B, 160B, 161B-Entrance, or office door lock.	1,2,3	F82-Entry lock.
160C, 161C-Entrance, office building and lavatory door lock.	1	F88-Apartment, exit or public toilet lock.
159D, 160D, 161D-Store room or exit door lock.	1,2,3	F86-Store room or closet lock.
160E, 161E-Service station door lock.	1,2	F92-Service station lock.
159F- Communicating door lock.	3	F80-Communicating lock.
160F, 161F-Communicating door lock.	1,2	F80-Communicating lock.
		F91-Store door lock.
160G, 161G-Store door lock.	1	F91-Store door lock.
160H, 161H-Hotel guest room door lock.	1,2	F93-Hotel guest room, club house,dormitory or apartment entrance lock.
159L, 160L-Bath or bedroom privacy door lock.	2,3	F76,F76A,F76B-Privacy,bed-room or bath lock.
161L-Bath or bedroom privacy door lock.	1	F76-Privacy, bedroom or bath lock.
160M,161M-Communicating door lock.	1,2	F78-Communicating lock.
159N,160N,161N-Passage or closet door latch.	1,2,3	F75-Passage or closet latch.
159NX,160NX,161NX-Exit door	1,2,3	F89-Exit latch.
159P-Patio or inner office door lock.	3	F77A and F77B-Patio or privacy lock.
160P-Patio or inner office door lock.	2	F77A-Patio or privacy lock.
160P,161P-Patio or inner office door lock.	1,2	F77-Patio or privacy lock.
159Q,160Q,161Q-Keyless exit door lock.	1,2,3	F83-Exit lock.
159R,160R,161R-Classroom door lock.	1,2	F84-Classroom lock.
159S,160S,161S-Communicating door lock.	1,2	F80-Communicating lock.
161T-Public rest room or dormitory bedroom door lock.	1	F90-Corridor lock.

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Table II. (continued)

160W,161W-Key turn door	1	F87-Utility,asylum or institutional lock.
Series 140-Integral type lock and latch sets.	1	F54 through F69-Integral locks and latches.

Table III. Classification cross-reference (door trim)

Classification FF-H-00106b types	Corresponding ANSI A156.6 designation
456-Combination push and pull plate	Product type J300-Push plates, push-pull plate
458-Hospital arm pull	Product type J400-Door pulls, single base arm
458A-Hospital arm pull	Product type J400-Door pulls, double base arm
459-Flush cup pull	Product type J400-Door pulls, flush pull
460,465,468-Push plates	Product type J300-Push plates
470,471,472,472A-Push bars	Product type J500-Push bars
475,476,476A-Combined push and pull bar	Product type J500-Bar set option.
476E,476EA-Combined push-pull bars	Product type J500-Extended pull bar
478,479,479A,479E,479EA-Combination set	Product type J500-Bar set option
492-Door or window guard bars	Product type J500-Guard bar

6.6 Deleted type numbers. Some items of hardware (not cross-referencable to ANSI A156.2 and A156.6) previously presented in FF-H-00106b, dated August 21, 1967, are no longer available in the industry and have been deleted from this specification. The deleted items are listed by type number and are as follows:

3A	90&98NX	200	310	360
3AA	90&98Q	200M	310M	436
3B	90&98S	200MS	315	436A
3C	90&98T	200S	315M	437M
3D	90&98U	201	325	439
8A	90&98W	201G	326	450
8AR	90&98X	201S	335	455
85D	159M	204	335S	465R
85DW	161U	212	336	493
86D	161X	223	355	494
86DW		223A	356	

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## 6.7 Finishes.

6.7.1 Standard finishes. The standard finishes for builders' hardware are intended primarily to promote reasonable uniformity in the appearance of builders' hardware items. These finishes are subject to variations in appearance, and samples are used by the manufacturer as a guide or color and texture. Samples of the following finishes are available for reference purposes: BHMA 605, BHMA 606, BHMA 612, BHMA 618, BHMA 625, BHMA 626, BHMA 627, BHMA 628, BHMA 629, and BHMA 630. These may be obtained singly or in sets from the Builders' Hardware Manufacturer's Association, 60 East 42nd Street, New York, NY 10017.

6.7.2 Comparison of standard finishes. Owing to differences in the processes of producing hardware finishes and the variety of metals to which they are applied, it is commercially impracticable to attain an exact match. Therefore, it is understood that hardware delivered in a standard finish from two or more sources will compare reasonably when the items are viewed at arm's length and approximately 2 feet. This approximates the conditions of use, as for example, hinges and lock trim on opposite edges of a door.

6.7.3 Oxidized finishes. Oxidized finishes represent the natural aging of metals and change with time; therefore, some variations from standard may be expected. An oxidized finish artificially produced may not match a similar finish produced by age.

6.8 Keying. The manufacturer may be requested to lay out sufficient changes, in addition to those covered by the order, to provide for such future expansion as may be contemplated. However, in order that locks subsequently obtained will properly conform to the master key system thus established, it may be necessary to obtain the additional locks or cylinders from the original manufacturer.

6.8.1 Duplication of master keys. The manufacturer should refer all requests for duplicate master keys and information on master key change numbers to the executive head of the Government agency to which the locks were furnished or other authority as may be designated by him when the request does not indicate proper responsibility for the material or information desired.

## 6.9 Rules for hands of locks.

Rule A. The hand of a lock, including locks for French doors, is determined from the outside of the door to which it is applied. The outside of a cupboard, bookcase, or closet door is the room side. For other doors, the outside is usually the "push" or jamb side but always on the cylinder side.



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Rule B. If, when standing outside of a door, the butts are on the right and the door swings away from you, it takes a right hand lock; if butts are on the left and the door swings away from you, it takes a left hand lock.

Rule C. If standing outside and door opens toward you, doors with butts on right take a right hand reverse lock; if butts are on left it takes a left hand reverse lock.

6.10 Definitions. Given below are definitions of some of the special terms, generally applied to builders' hardware by the trade:

(a) Backset (of a lock) - The horizontal distance from the face of the lock to the center line of knob hub, keyhole or cylinder.

(b) Bit (of a key) - The projecting blade which is cut in a manner to actuate the tumblers and permit the lock bolts to be operated.

(c) Builders' Hardware - Term applied to all hardware used in building construction but particularly that used on or in connection with doors, windows, cabinets and other movable members.

(d) Cylinder (of a lock) - The cylindrical shaped assembly containing the tumbler mechanism and the keyway, which can be actuated only by the correct keys.

(e) Deadbolt (of a lock) - A lock bolt having no spring action nor bevel, and which is operated by a key or a turn piece.

(f) Deadlocking Latch Bolt - A latch bolt incorporating a plunger that is held in a retracted position when a door is closed, thus preventing the bolt from being retracted by end pressure.

(g) Face (of a lock) - The exposed surface which shows in the edge of a door after installation. (See Front.)

(h) Front (of a lock) - The plate through which the latching or locking bolts project. (See Face.)

(i) Latch Bolt - A beveled spring bolt, usually operated by a knob, handle or turn.

(j) Lock Set - A lock, complete with trim, such as knobs, escutcheons, or handles.

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(k) Paracentric - A term used in connection with cylinder plugs having projections on the sides of the keyway that extend into the keyway.

(l) Pin Tumblers - Small sliding pins in a lock cylinder, working against coil springs and preventing the cylinder plug from rotating until the pins are raised to the proper alignment by biting of key.

(m) Stop (of a lock) - The button, or other small device, which serves to lock the latch bolt against the outside knob or thumb piece or unlock it if locked. Another type holds the bolt retracted.

(n) Spindle (of a knob) - The bar or tube connected with the knob or lever handle that passes through the hub of the lock or otherwise engages the mechanism to transmit the knob action to the bolt(s).

(o) Strike - A metal plate or box which is pierced or recessed to receive the bolt or latch when projected. Sometimes called Keeper.

(p) Tumbler - A guard or obstruction which prevents operation of a bolt except by insertion of the proper key.

6.11 Supersession data. This specification supersedes in part FF-H-106a dated November 23, 1948 and FF-H-00106b dated August 21, 1967. For hardware items no longer covered by this specification refer to FF-H-1819 for auxiliary lock types and FF-H-1820 for exit devices.

6.12 Asterisks are not used in this revision to identify changes with respect to the previous issue, due to the extensiveness of the changes.

## MILITARY CUSTODIANS:

Army - WC

Navy - YD

Air Force - 82

## Preparing activity:

Navy - YD

## Civil Agency Coordinating Activity:

VA - DMS

## Review activity:

DSA - IS

## User activity:

Army - ME

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