

INCH POUND

FF-W-84A  
AMENDMENT 4  
27 May 1992  
**SUPERSEDING**  
AMENDMENT 3  
7 March 1980

FEDERAL SPECIFICATION  
WASHERS, LOCK (SPRING)

This amendment which forms a part of Federal Specification FF-W-84A, dated 17 April 1967, is approved by the General Services Administration, for the use by all Federal Agencies.

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- 1.2 Under all classes, style 2: Delete "Medium" and substitute "Regular".
- 1.2 Under class A, style 4: Delete "Extra heavy" and substitute "Extra duty"
- 1 2 Under classes A and C: Add "Style 5 - Hi-Collar"
- 1 2 Add "Class G - Nickel-copper-aluminum alloy (K-Monel)"

Style 1 - Light

Style 2 - Regular

- \* 2.1 Under *Federal Specifications*; Delete "QQ-Z-325 - Zinc Coating, (Electrodeposited), Requirements For".  
2.1 Under *Federal Specifications*. Add "PPP-H-1581 - Hardware, (Fasteners and Related Items), Packaging of".
- \* 2.1 Under *Federal Standards*: Delete "Fed. Std. No. 66 - Steel: Chemical Composition and Hardenability".
- \* 2 1 Under *Federal Standards*: Delete "Fed. Std. No 595-Colors".

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2.1 Under *Military Specifications*: Delete "MIL-H-3982 - Hardware (Fasteners and Related Items), Packaging and Packing for Shipment and Storage of."

AMSC N/A

FSC 5310

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- \* 2.1 Under Military Specifications: Add "MIL-C-13924 - Coating, Oxide, Black, For Ferrous Metals".
- \* 2.1 Under Military Specifications: Add "MIL-C-81562 - Coatings, Cadmium, Tin-Cadmium, and Zinc (Mechanically Deposited)".
  - 2.1 Under Military Standards, MS 35338. Delete "Washer, Lock, Split, Helical, Medium Series" and substitute "Washer, Lock-Spring, Helical Regular (Medium) Series".
- \* 2.1 Under Military Standards: Add "MS 51416 - Washer, Lock-Helical Spring, Heavy Duty"
  - 2.1 Under Military Standards: Add "MS 51848 - Washer, Lock-Helical Spring, Hi-Collar".
- \* 2.2 Delete "United States of America Standards Institute (USASI) Publication." and substitute "American National Standards Institute (ANSI) Publication."
  - ASME B18 21 1 - Lock Washers (Inch Series).  
  
(Application for copies should be addressed to the American National Standards Institute, 11 West 42nd Street, 13th Floor, New York, New York 10036)"
- \* 2.2 Under (ASTM) Add -
  - "ASTM A29/A29M - Steel Bars, Carbon and Alloy, Hot-Wrought and Cold-Finished, General Requirements for
    - ASTM A 276 - Bar and Shape, Stainless and Heat Resisting Steel
    - ASTM A 581 - Steel Wire, Free Machining Stainless and Head Resistant
    - ASTM B 633 - Zinc on Iron and Steel, Electrodeposited Coatings of"
- \* 2.2 Under (CDA): Delete address and substitute "Copper Development Association, 2 Greenwich Office Park, P O. Box 1840, Greenwich, CT 06836-1840".
- \* 3.1.1, Line 4" Delete "in conformance to the requirements of Fed Std. No 66" and substitute "(UNS G10600) to (UNS G10800) in conformance with ASTM A29".
- \* 3.1.1, Line 8 Delete "45 to 53 Rockwell C" and substitute "38 to 46 HRC".
- \* 3.1.1 Delete last sentence and substitute "The washers shall meet the decarburization limits of ASME B18.21.1 "

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- \* 3.1.2 Line 4. Delete "in conformance with the requirements of Fed. Std. No. 66" and substitute "(UNS S42000) in conformance with ASTM A276."
- 3.1.2 Last Line: Delete "43" and substitute "45".
- \* 3.1.3 Line 5: Delete "in conformance with the requirements of Fed. Std. No 66" and substitute "(UNS S30300) to (UNS S30323) in conformance with ASTM A581."

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- \* 3.1.7: Delete in its entirety.
- 3.2.1, 3.2.2, and 3.2.3. Delete "USA B27.1" and substitute "ASME B18.21.1".
- 3.2.2 Line 2: Delete "and 4" and substitute "4 and 5".
- 3.2.2 Last Line: Delete "and MS35340" and substitute "MS35340, and MS51848".
- \* 3.2.4 Last Line: Delete "4.5.3" and substitute "4.5.1".
- \* 3.3.1 Last Line. Delete "class 3" and substitute "class 2 or MIL-C-81562, Type II, class 2 (No substitutes allowed)."
- \* 3.3.2 Delete and substitute. "3.3.2 Zinc coating. When specified (see 6.2), zinc coating by electrodepositing process shall be in accordance with ASTM B633, Type II, Class Fe/Zn8. Hydrogen embrittlement relief requirement shall be met for washers 38HRC and higher. Mechanically deposited process in accordance with MIL-C-81562, Type II, class 6 may be used in lieu of electrodepositing process "

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- 3.3.4 Last Line. After "type z" add "class 2"
- \* 4.2 Delete in its entirety and substitute "4.2 Lot A lot shall consist of all washers of one type, grade, style, same heat number of material, finish and size on the same contract or order, produced by the manufacturer under essentially the same conditions and submitted for inspection at the same time."
- \* 4.3.2 Line 2 Delete "4 4 1" and substitute "4 4 2".

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- \* 4.4.2 Line 2: Delete "of 4.3.1" and substitute "as specified in section 3 herein".
- \* 4.5.3 Line 2: Delete "USA B27.1" and substitute "ASME B18.21.1".
- 4.5.8 Delete and substitute "4.5.8 Examination and test of packaging. The preservation, packing, and marking for military procurement shall be examined or tested in accordance with PPP-H-1581."
- 5 Delete "PREPARATION FOR DELIVERY" and substitute "PACKAGING".
- 5.1 Delete and substitute. "5.1 Preservation and packing Preservation of washers shall be level A or B and packed level A or B, or commercial in accordance with PPP-H-1581 The level of protection shall be as specified in the contract or order (see 6.2)."

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- 6.2 Item (h): Delete "levels of packaging" and substitute "degrees of preservation".

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6.2.1 Delete entirely.

6.4 Delete and substitute: "6.4 Supersession data: Classes A and B, style 5 – Washer and machine screw assemblies have been deleted from this document. It is suggested that ASME/ANSI B18.13 for Screw and Washer Assemblies, Sems, be used for procurement."

The margins of this amendment are marked with an asterisk to indicate where changes (additions, modifications, corrections, deletions) from the previous amendment were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous amendment.

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