

MIL-A-243198(EC)
 AMENDMENT 5
 24 January 1986
 SUPERSEDING
 AMENDMENT 4
 23 August 1985

MILITARY SPECIFICATION

ANTENNA, WHIP, 10.67 METER (35 FEET),
 AS-2537()/SR

This amendment forms a part of Military Specification MIL-A-243198 dated 6 April 1981, and is approved for use by the Space and Naval Warfare Systems Command Department of the Navy, and is available for use by all Departments and Agencies of the Department of Defense.

Title: Delete and substitute: "Antenna, Whip, 10.67 Meter (35 Feet), AS-2537()/SR".

PAGE 1

- * 2.1 "SPECIFICATIONS" "FEDERAL": Delete "QQ-N-35" and add:

"FF-B-575	Bolts, Hexagon And Square
"QQ-B-626	Brass, Leaded And Nonleaded: Rod, Shapes, Forgings, And Flat Products With Finished Edges (Bar And Strip)
"QQ-B-750	Bronze, Phosphor; Bar, Plate, Rod, Sheet, Strip, Flat Wire, And Structural And Special Shaped Sections"

- * 2.1 "SPECIFICATIONS" "FEDERAL": After "QQ-C-533", delete:

"QQ-B-626	Yellow Brass"
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- * 2.1 "SPECIFICATIONS" "MILITARY": After "MIL-S-901(NAVY)", add:

"MIL-S-1222	Studs, Bolts, Hex Cap Screws, And Nuts"
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- * 2.1 "SPECIFICATIONS" "MILITARY": After "MIL-E-17555", add:

"MIL-F-18240	Fastener, Externally Threaded, 250°F, Self-Locking Element For"
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PAGE 2

3.3.1.1.1, line 2: Delete "AN/URA-() Selective Antenna Coupler Group" and substitute "OA-9122/SRC Antenna Coupler Group".

3.3.1.1.1, line 3: Delete "AN/URA-38 Antenna coupler group" and substitute "AN/URA-38 Antenna Coupler Group".

The attached insertable replacement pages listed below are replacements for stipulated pages. When the new pages have been entered in the document, insert the amendment as the cover sheet to the specification.

Replacement page

5
6

Page replaced

5
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PAGE 3

3.3.2.2: Delete text and substitute:

"The antenna shall have a maximum envelope diameter of 13.5 in. and a maximum height of 36 ft."

3.3.3: Add "The antenna shall be capable of conforming to the specific failure criteria of 4.5.18."

PAGE 4

3.3.3.6.2, line 5: Delete "4.15.5.2" and substitute "4.5.16.2".

3.3.3.10, line 4: Delete "three resonant frequencies" and substitute "four resonant frequencies (natural modes)".

* 3.4.1.1, add as first sentence: "Fastener hardware shall be in accordance with MIL-S-1222."

PAGE 7

3.5.2.2, line 1: Delete "an even number of" and substitute "six".

PAGE 8

3.6.1.1.2, line 3: Delete "4.13" and substitute "3.90".

3.6.1.1.2, line 4: Delete "6.30" and substitute "5.50".

3.6.1.2.2, line 3: Delete "4.13" and substitute "3.90".

3.6.2.2, line 1: Insert "internal" between "an" and "O-ring".

3.6.2.2: Delete third sentence added by Amendment 1.

3.6.3.1, line 2: Delete "natural vibration modes" and substitute "natural vibration modes above mode 1".

Delete paragraph number "3.5.3.2" and substitute "3.6.3.2".

PAGE 9

3.7.1b, line 2: Delete "application tube of room temperature vulcanizing (RTV) silicone rubber sufficient to backfill the three locking pin holes and the 45° chamfer groove", inserted by Amendment 1, and substitute "small application tube of room temperature vulcanizing (RTV) silicone rubber".

3.7.2a, line 1: Delete "on" and substitute "or".

3.9, after first sentence: Add "Each matched upper and lower section of an antenna shall be clearly marked with that antenna's serial number."

PAGE 12

4.5.6, line 3: Delete "a maximum of 18 in of" and substitute "an 18-inch".

PAGE 13

4.5.15: Delete first sentence and substitute: "The antenna shall be vertically mounted on a truck bed using a specially fabricated antenna mount."

4.5.16, line 2: Delete "4.16.1 and 4.16.2" and substitute "4.5.16.1 and 4.5.16.2".

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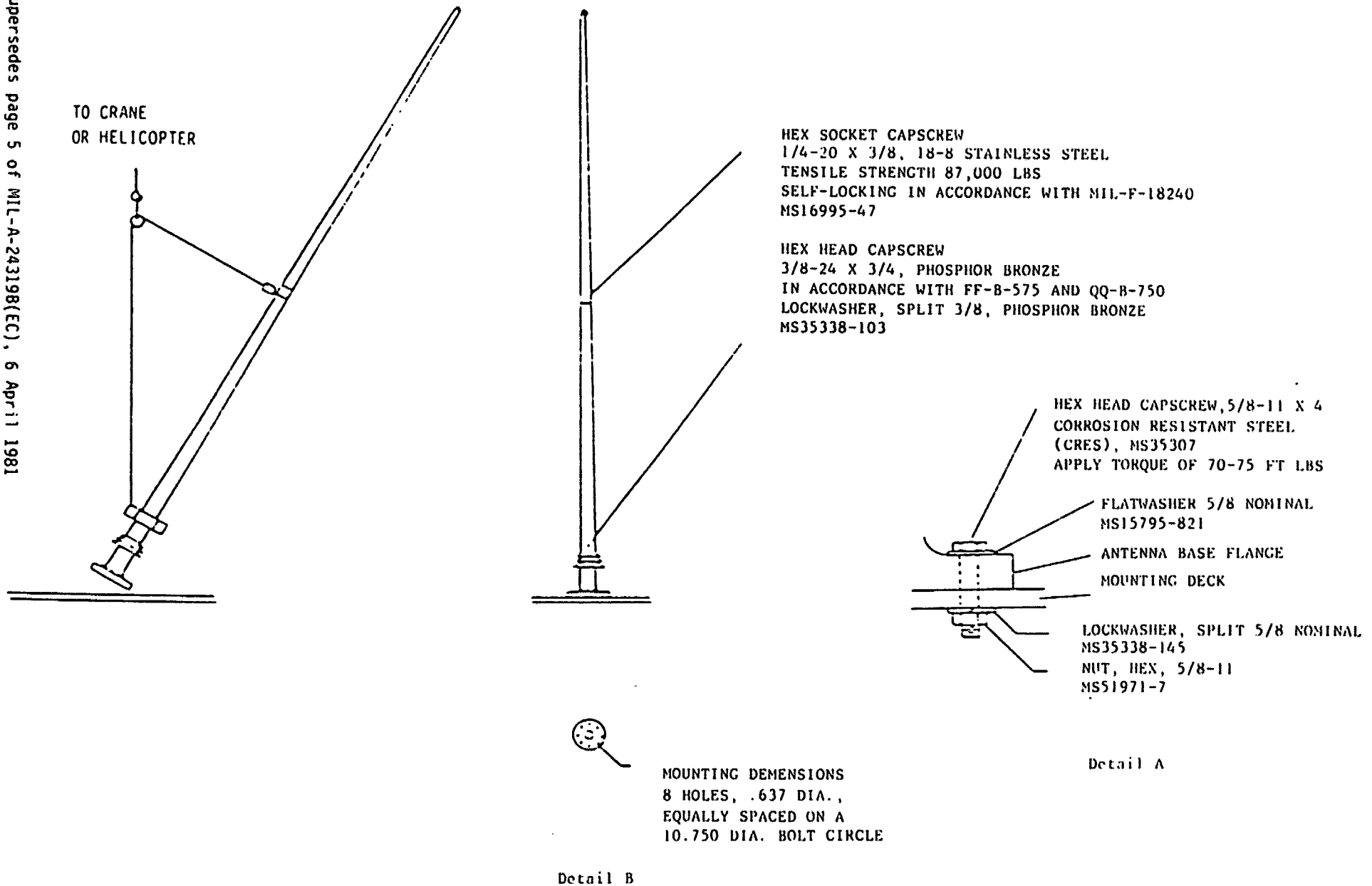
4.5.18, add: "An additional cause for failure shall be leakage resistance from the antenna feed point to a metal base mounting plate of less than 1000 megohms at completion of the salt fog test and prior to any rinsing, cleaning or drying. All measurements shall be made with a Biddle Megger, or equivalent megohmmeter with 600 volt potential minimum. The metal base mounting plate for the 24-inch section shall be 1/2 inch thick, 6061-T6 aluminum alloy, 24-inches square and drilled to match the mounting hole pattern of the antenna mounting base. This plate shall have a 6-inch diameter hole drilled in the center of the antenna base hole pattern to allow the ingress of salt fog during this test. The plate shall have a Class 1A chemical conversion coating in accordance with MIL-C-5541 after all holes are drilled. The antenna section which was used in test 4.5.17.1a shall be bolted to this mounting plate in accordance with FIGURE 1.

4.5.24, line 2: Delete "Procedure II" and substitute "Procedure I".

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.

Preparing activity:
NAVY - EC

(Project No. 5985-N529(EC))

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3.4.2.1.1 Reinforcing materials. The reinforcing material for the insulator shall be Type E (electrical grade) alumina borosilicate glass with a silane finish (sizing). Reinforcing material shall be continuous glass roving gathered without mechanical twist. Yarn, fabric, or other woven material shall not be utilized.

3.4.2.1.1.1 Glass roving. The glass roving shall not contain grease, oil, or dirt inside its form. The glass roving shall not contain knots, loose strands, or fuzz accumulation which will cause a detectable change in the smoothness of the glass roving.

3.4.2.1.2 Epoxy resin system. The antenna shall employ an epoxy resin system in accordance with MIL-R-9300.

3.4.2.2 Grading rings. The grading rings shall be of fiberglass reinforced plastic (FRP) composite material.

3.4.2.3 Antenna mounting base. The antenna mounting base shall be of FRP composite material made of the same glass and resin system as the antenna structure proper.

3.4.2.4 Antenna current carrying material.

3.4.2.4.1 Longitudinal current carrying strips. The antenna current carrying material shall be beryllium copper alloy strip, copper alloy number 172, half hard (1/2 hard) per QQ-C-533.

3.4.2.4.2 Corona shield. The corona shield used in the upper section of the antenna to terminate the top section longitudinal current carrying strips shall be of brass per QQ-B-626, composition 22, 1/2 hard.

3.4.2.4.3 Midsection coupling joint. The upper and lower halves of the midsection coupling joint shall be of brass per QQ-B-626, composition 22, 1/2 hard.

3.4.2.4.4 Lower section collector ring. The lower section collector ring terminating the lower section longitudinal conductors shall be of brass per QQ-B-626, composition 22, 1/2 hard.

3.4.2.5 Static seals. The midsection coupling joint shall employ a deformable O-ring static seal in accordance with MIL-E-16400 to preclude entry of moisture and salt spray.

3.4.3 Processes.

3.4.3.1 Castings. All castings used shall be in accordance with MIL-E-16400.

3.4.3.2 Corrosion protection and corrosion resisting treatments. All metal structures and assemblies used in the antenna shall be protected from corrosion by a chemical conversion treatment per MIL-C-5541, Type III.

3.4.3.3 Painting. The paint system used for the antenna shall meet the adhesion and blister resistance requirements of MIL-E-16400.

3.4.3.3.1 Antenna exterior. The external structure of the antenna shall be painted in accordance with MIL-E-16400 with a cyclo-aliphatic epoxy paint which includes an ultra-violet screen and exhibits anti-electrical erosion and self-extinguishing properties.

3.4.3.3.2 Antenna metal components. The antenna metal components shall have the necessary interface (primer) coatings between the MIL-C-5541 metal surface treatment and the cyclo-aliphatic top coating on all surfaces exposed to the environment and where electrical contact is not required for proper electrical operation.

* 3.4.3.3.3 Antenna interior. The entire interior of the lower section shall be postcoated with Dow-Corning T-2577 Conformal Coating, or equal, silicone elastoplastic resin.

3.4.3.4 Brazing. Brazing shall be in accordance with the brazing requirements of MIL-E-16400.