

NOT MEASUREMENT SENSITIVE

MIL-C-38214B (USAF)
AMENDMENT 4

10 OCTOBER 1988
SUPERSEDING
AMENDMENT 3
31 MARCH 1983

MILITARY SPECIFICATION

COMPASS, MAGNETIC, MOUNTED

This amendment forms a part of MIL-C-38214B(USAF), dated 7 October 1968, and is approved for use within the Department of the Air Force and is available for use by all Departments and Agencies of the Department of Defense.

PAGE 1

- * 2.1 Delete 'title and first sentence' and add: "Government documents."
- * Add: "2.1.1 Specifications and standards. The following specifications and standards form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2)".

Under SPECIFICATION, Federal, delete "QQ-Z-325", "PPP-B-566", "PPP-B-665", "PPP-B-676" and add "PPP-B-601 Boxes, Wood, Cleated Plywood".

Add boxed paragraph to bottom center of page

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to Oklahoma City Air Logistics Center/MMEDC, Tinker AFB OK 73145-5990 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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PAGE 2

- * Under "STANDARDS, Military", delete "MS33586" and add the following:

"MIL-STD-785
MIL-STD-889
MIL-STD-965
MIL-STD-2073-1

Reliability Program For Systems And Equipment
Development And Production
Dissimilar Metals
Parts Control Program
DOD Material Procedure For Development And
Application Of Packaging Requirements".

AMSC N/A

1 of 7

FSC 6605

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MIL-C-38214B(USAF)
AMENDMENT 4

- * Add: "2.2 Non-Government publications. The following document(s) form a part of this document to the extent specified herein. Unless otherwise specified, the issues of the documents which are DOD adopted are those listed in the issue of the DODISS cited in the solicitation. Unless otherwise specified, the issues of documents not listed in the DODISS are the issue of the documents cited in the solicitation (see 6.2).

American Society For Testing And Materials (ASTM)

ASTM B633 Electrodeposited Coatings Of Zinc Or Iron

ASTM D3951 Packaging, Commercial

(Application for copies should be addressed to ASTM, 1916 Race St, 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.)"

- * Add "2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein (except for related associated detail specifications, specification sheets or MS standards), the text of this documents take precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained."

3.1 Delete paragraph and add "3.1 First article. When specified (see 6.2) a sample shall be subjected to first article inspection in accordance with 4.2."

PAGE 3

3.3.1.1 Delete "MS33586" and add: "MIL-STD-889".

- * Add "3.5.5 Recycled and reclaimed materials. Recycled and reclaimed materials shall be encouraged to the maximum extent possible without jeopardizing the intended end use of the item."

PAGE 7

3.4.5.3 Add the following at the end of the existing paragraph. "The compensator frame shall be made of die cast zinc, cadmium plated. The gears and shafts shall be on one-piece brass construction, cadmium plated. Compensator magnets shall be inserted through the appropriate shafts. The cadmium plating of both zinc and brass will provide electrolytic corrosion protection for the dissimilar metals in contact. The compensator shall be able to pass the salt spray test of section 4 of this specification when tested separately (i.e., not mounted in the compass)."

3.4.6.1 Delete third sentence and add: "The prime standard shall be equipped with the applicable lighting, shall meet all specification requirements and shall be used as the reference for quality conformance acceptance of the lighting on production compasses."

MIL-C-38214B(USAF)
AMENDMENT 4

PAGE 8

Top of page 8 and 9 Change 'MIL-1-38314B(USAF) to read "MIL-1-38214B(USAF)

3.4.10 Delete paragraph and add "3.4.10 Reliability. The compass shall demonstrate an upper test MTBF (⁰) of 3000 hours. A failure shall be defined as any degradation below the minimum operational limits specified herein."

PAGE 11

* 3.10.2 Line 3 delete "QQ-Z-325" and add. "ASTM B633."

* 3.10.3 Line 5 delete 'QQ-Z-325' and add "ASTM B633."

PAGE 12

Add new paragraph as follows "3.14 Parts control. A parts control program shall be conducted in accordance with MIL-STD-965."

* Add "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 an inspection requirements in the specification shall not relieve the contractor of the responsibility of ensuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling inspection, as part of manufacturing operations, is an acceptable practice to ascertain conformance to requirements, however, this does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to accept defective material."

PAGE 13

* Delete 4.2, 'a' and 'b' entirely and add new "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).

4.4 Delete "Qualification testing" and add "First article inspection".

4.4.2 Delete paragraph entirely.

4.4.3 Delete "Qualification tests" and add: "First article inspection in (2) places.

PAGE 16

4.5.2.4.1 Line 1 delete "Figure 4" and add: "MIL-STD-781C, Test Plan IC as modified by the following". Line 9, change "31,400" to read "30,240".

MIL-C-38214B(USAF)
AMENDMENT 4

PAGE 17

Figure 4. Delete and add. new figure 4.

PAGE 23

4.6.29 Add the following before sentence one of existing paragraph: "Testing shall be in accordance with MIL-STD-781C, Test Plan IC (modified). Modification shall be in accordance with contents of paragraph 4.5.2.4.1 herein. Lines 2 and 5, existing paragraph, delete "figure 5" and add: "figure 4". Last line, change "the compass shall" to read "each compass shall also."

* 4.6.29.1 Delete "figure 5" in line 2 and add: "figure 4."

* 4.6.29 Line 2 delete "figure 5" and add: "figure 4."

PAGE 24

Figure 5 Delete figure 5 entirely.

PAGE 25

4.6.30 In line 2, delete "for a total of" and add "until each unit has accumulated at least."

* Delete Section 5 in its entirety and add

"5. PACKAGING

5. Preservation. Preservation shall be level A, C, or Industrial, IAW MIL-STD-2073-1, as specified (see 6.2)

5.1.1 Level A.

5.1.1.1 Cleaning. Compasses shall be cleaned in accordance with process C-1 or MIL-P-116.

5.1.1.2 Drying. Compasses shall be dried in accordance with process D-4 of MIL-P-116.

5.1.1.3 Preservation application. Preservative shall not be used.

5.1.1.4 Unit packaging. Unless otherwise specified by the contracting activity, each compass shall be packaged in quantity unit packs of one each in accordance with Method 1A8 of MIL-P-116. Each compass shall be placed in a PPP-B-636 Fiberboard container weather resistant, with sufficient cushioning material between bag and unit container of a type, density, and thickness to insure shock transmission does not exceed peak values in G's established for the compass when completed packs are subjected to the rough handling drop tests of MIL-P-116.

5.1.2 Level C. Each compass shall be clean, dry, and individually packaged in a manner that will afford adequate protection against corrosion, deterioration, and physical damage during shipment from supply source to the first receiving activity.

MIL-C-38214B(USAF)
AMENDMENT 4

5.1.3 Industrial. The Industrial preservation of compasses shall be in accordance with ASTM D3951.

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

5.2.1 Level A. Compasses packaged as specified in 5.1.1 shall be packed in shipping containers conforming to PPP-B-601, Styles A or B, Class overseas, unless otherwise specified by the contracting activity. Insofar as practical, exterior shipping container shall be of uniform shape, size, minimum tare and cube consistent with the protection required.

5.2.2 Level B. Compasses packaged as specified in 5.1.1 shall be packed in shipping containers conforming to PPP-B-636, class weather-resistant, unless otherwise specified by the contracting activity. Other requirements as specified in 5.2.1 apply.

5.2.3 Level C. Packing shall be applied which affords adequate protection during domestic shipment from the supply source to the first receiving activity for immediate use. This level shall conform to applicable carrier rules and regulations.

5.2.4 Industrial. The packaged compass shall be packed in accordance with ASTM D3951.

5.3 Marking. In addition to any other markings required by the contract or order (see 6.2), interior and exterior containers shall be marked in accordance with MIL-STD-129.'

6.2 Add the following subparagraphs

g" When first article is required (See 3.1 and 4.2)

n. Any special instructions for qualification of the prime stand(s) for lighting

1. Whether tests of paragraphs 4.5.2.2c, d, e and f may be performed on empty cases. If no statement is made, complete compasses must be used."

"(Sampling plan A is always required)'

PAGE 27

6.3.2 Delete "minimum acceptable" and add: "lower test (⁰1)" and delete "contractually specified" and add: "upper test (⁰0)."

* 6.4 Delete paragraph entirety and add new: "6.4 First article. When a first article inspection is required sample units shall be inspected as specified (see 3.1 and 4.2)."

* Delete "6.5" entirety

MIL-C-38214B(USAF)
AMENDMENT 4

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.

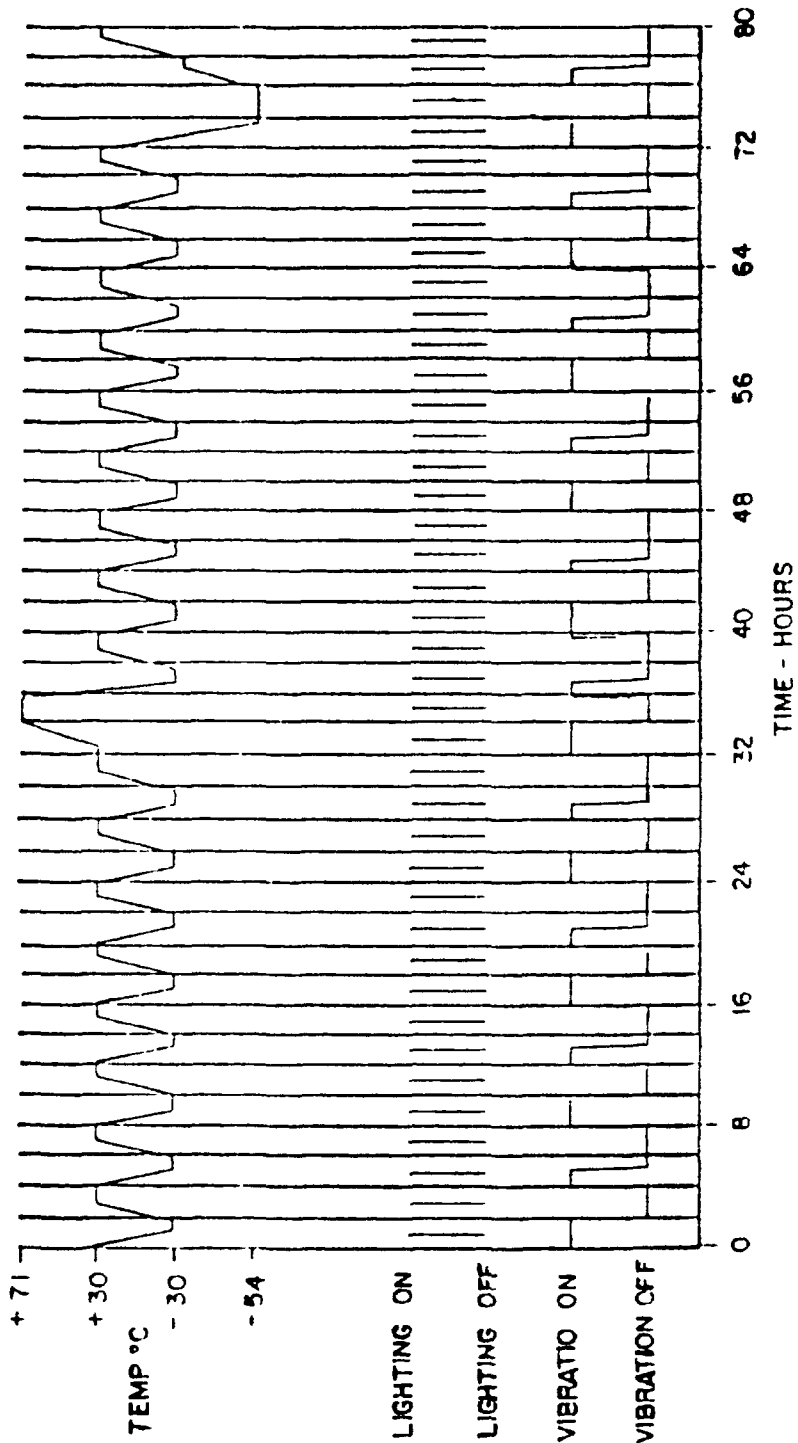
Custodian.
Air Force -99

Preparing activity:
Air Force -71

Project No:
6605-F393

MIL-C-38214 B (USAF)

Amendment 4



NOTE LIGHTING IS TURNED OFF 3 MINUTES AFTER EVERY 57-MINUTE RELIABILITY TEST PERIOD

FIGURE 4 Environmental cycling