

INCH-POUND

MIL-G-25597D (USAF)
AMENDMENT 5
15 MARCH 1994
SUPERSEDING
AMENDMENT 4
4 AUGUST 1986

MILITARY SPECIFICATION

GYROSCOPE, DISPLACEMENT, ROLL, AND PITCH, TYPE MD-1

This amendment forms a part of MIL-G-25597D(USAF), dated 6 August 1973, and is approved for use by the Department of the Air Force and is available for use by all Departments and Agencies of the Department of Defense.

PAGE 1

Delete "2.1" and add: "2.1 Government documents."

Add: "2.1.1 Specification, standards, and handbooks. The following specifications, standards, and handbooks 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-P-416" and add: "PPP-B-636 Boxes, Shipping, Fiberboard".

Under SPECIFICATIONS, Military, delete "MIL-I-6181"; "MIL-I-38442" and add: "MIL-M-7793/6 Meter Time Totalizing Miniature, Digital 115 Volt 400 Hz" and MIL-C-83488 Coating, Aluminum, ION Vapor Deposited".

Add boxed paragraph to bottom center of page.

Beneficial improving this document should be to: Oklahoma City Air Logistics Center/TICLA, Tinker AFB, OK 73145-5990 by using all comments (recommendation, additions, deletions) and any pertinent data which may be of use in the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

MIL-G-25597D(USAF)
AMENDMENT 5

PAGE 2

* Under STANDARDS add: "Federal" and under Federal add: "FED-STD-101 Preservation, Packaging And Packing Materials: Test Procedures".

* Under STANDARDS, Military, delete "MIL-STD-143"; "MS17322"; "MIL-STD-794" and add: "MIL-STD-461 Electromagnetic Emission And Susceptibility Requirements For The Control Of Electromagnetic Interference"; "MIL-STD-462 Electromagnetic Interference Characteristics, Measurement Of"; "MIL-STD-970 Standards & Specification, Order Of Preference For The Selection Of" and add: "MIL-STD-2073-1 DOD Material Procedures For Development And Application Of Packaging Requirements".

Delete following parenthetical source and add: "(Unless otherwise indicated, copies of federal and military specifications, standards, and handbooks are available from the Standardization Document Order Desk, 700 Robbins Ave, Building #4, Section D, Philadelphia, PA 19111-5094.)

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

3.3 Line 3 delete "MIL-STD-143" and add: "MIL-STD-970".

PAGE 3

Add: "3.4.3.1 Recovered materials. Recovered materials shall be used to the maximum extent possible without jeopardizing the end use of the item."

PAGE 4

Figure 1, Warning decals, delete: "Decals both sides yellow letters 3/8 high" and substitute "Direct Marking or decals both sides in yellow letters, "WARNING: 3/8 high, others 3/8 or 1/4 high. NOTICE LOCATION OPTIONAL".

PAGE 10

Paragraph 3.5.11 (b) delete "or the ARK-24/A indicator conforming to MIL-I-38442", and add a period (.) after MIL-I-27619.

MIL-G-25597D(USAF)
AMENDMENT 5

PAGE 11

3.6i: Delete and add: "i. Dielectric strength-300V, 60 Hz ac applied between isolated pins and between pins and the case (except those pins connecting the gyroscope erection switches)."

PAGE 12

* Delete "3.6.2" entirely and add:

"3.6.2 Electromagnetic interference and susceptibility. The gyroscope assembly shall meet the electromagnetic interference and susceptibility requirements of MIL-STD-461 for class A1 equipment."

Add paragraph 3.6.4

"3.6.4 Life. The gyroscope shall be designed and built for a minimum repairable service life of 10 years."

* 3.11 Line 1 delete "MS17322" and add: "MIL-M-7793/6".

PAGE 19

Delete "3.17.2" entirely and add:

"3.17.2 Steel parts. Steel parts shall be coated with ion vapor deposited aluminum, where practicable, in accordance with MIL-G-83488, type I or II as applicable and of a class that is adequate to achieve the degree of protection required. Other protective coating, in lieu of MIL-G-84388, may be used if demonstrated to be satisfactory and approved by the preparing activity. Cadmium plating must be avoided when satisfactory alternative processes can be used."

PAGE 20

* Delete "4.1" entirely and add:

"4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for performance of all inspection requirements (examinations and tests) 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 this specification where such inspections are deemed necessary to ensure supplies and services conform to prescribed requirements."

MIL-G-25597D(USAF)
AMENDMENT 5

* Add:

"4.1.1 Responsibility for compliance. All items shall 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 any 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 21

Paragraph 4.4.1 Line 2 and 3 delete "and furnish three complete copies of the report to the procuring activity", and add a "period(.)" at the end of the sentence.

PAGE 24

4.6.6 Seventh line: Delete "process" and add "precess".

PAGE 26

4.6.15 Third sentence: Delete and add: "Pin A shall be connected and the circuit between pins J and T shall close."

PAGE 27

4.6.20: Delete and add:

"4.6.20 Dielectric strength. A potential of 300V, 60 Hz ac shall be applied between isolated pins and between pins and the case for period of 10 seconds. There shall be no breakdown of insulation. No dielectric tests shall be made in circuits connected with the vertical gyro erection switches."

* Delete "4.6.24" entirely and add:

MIL-G-25597D(USAF)
AMENDMENT 5

"4.6.24 Electromagnetic interference and susceptibility. The gyroscope assembly shall be subjected to the electromagnetic interference and susceptibility tests specified in MIL-STD-462. The test methods shall be as specified in MIL-STD-461 for class A1 equipment."

4.6.25.1: Delete and add:

"4.6.25.1 High temperature exposure. The gyroscope shall be properly connected and subjected to a high temperature exposure test in accordance with method 501, procedure I, except that the exposure period shall be 20 hours and no power shall be applied. At the end of the 20-hour period and while at the high temperature the gyroscope shall be subjected to the initial erection, final erection, drift, gimbal freedom, and power-of warning circuit tests. The temperature shall be raised to $100 \pm 2^\circ \text{C}$ within 15 minutes and maintained for 30 minutes, then reduced to $71 \pm 2^\circ \text{C}$ within 15 minutes and maintained for two hours and 50 minutes. The gyroscope shall then be subjected to the gimbal freedom test."

PAGE 30

Delete "section 5" entirely and add:

*"5. PACKAGING

5.1 Preservation. Preservation shall be level "A" or "C" as specified (see 6.2).

5.1.1 Preservation-packaging. Unless otherwise specified by the contracting activity, item shall be packaged in Quantity Unit Pack (QUP) of one each. Each item will be provided a preservation method IA-14 In Accordance With (IAW) MIL-P-116.

PAGE 31

5.1.2 Cleaning. Item shall be cleaned IAW MIL-P-116 C-1 process.

5.1.3 Drying. Immediately after cleaning, the item shall be dried following any one or combination of the drying procedures listed in MIL-P-116. The drying procedures employed shall not be injurious to the item.

**MIL-G-25597D(USAF)
AMENDMENT 5**

5.1.4 Level A. Item shall be preserved IAW MIL-P-116 and MILSTD-2073-1 to provide a method IA-14.

5.1.5 Level C. Item shall be individually preserved in a manner that will afford adequate protection against corrosion, deterioration, and physical damage during shipment from the supply source to the first receiving activity as specified in MILP-116 and MIL-STD-2073-1.

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

5.2.1 Container-cushioning. Unit container requirements shall conform to established procedures, as specified in OC-ALC/DSTD Special Packaging Instructions (SPI) 00-303-6728, unless otherwise specified by the contracting activity. Unit container shall be large enough to allow for the application of cushioning/ wrap material, of sufficient density and thickness, to protect the unit container from punctures. Intermediate container requirements shall conform to OC-ALC/DSTD SPI 00-303-6728, unless otherwise specified by the contracting activity. Cushioning material requirements shall comply with OC-ALC/DSTD SPI 00-3036728.

5.2.2 Level A. Fiberboard containers do not meet Level "A" container criteria.

5.2.3 Level B. Item will be preserved as specified in 5.1 and shall be packed in exterior containers as specified in OCALC/DSTD SPI 00-303-6728, unless otherwise specified by the contracting activity. Closure shall be in accordance with appropriate PPP-B-636 procedures, OC-ALC/DSTD SPI 00-303-6728, and contracting activity.

5.2.4 Level C. Item will be packed in such a manner that will afford adequate protection against physical damage direct domestic shipment from the supply source to the first receiving activity. These packs shall conform to MIL-STD-2073-1.

5.3 Marking. Unit, intermediate, and exterior containers shall be marked IAW special markings required by the contracting activity, OC-ALC/DSTD SPI 00-303-6728 and MIL-STD-129.

5.4 Inspection and test. Test of methods of preservation shall be accomplished in accordance with section 4 of MIL-P-116 to insure compliance with section 5 of this specification. Packaging tests shall be conducted IAW rough handling as specified in FED-STD-101.

Under 6. NOTES. add: " (This section contains information of a general or explanatory nature that may be helpful, but is not mandatory)"

* 6.2 "Line 1" delete entirely and add: "Acquisition requirements. Acquisition documents must specify the following:".

MIL-G-25597D(USAF)
AMENDMENT 5

* 6.2 add: " e. Issue of DODISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.1)"

PAGE 32

6.7: Delete and substitute;

"6.7 Qualification. With respect to products requiring qualification, awards will be made only for products which are at the time set for opening of bids. qualified or inclusion in the applicable Qualified Products List whether or not such products have actually been so listed by that date. The attention of the contractors is called to this requirement, and manufacturers are urged to arrange to have the products that they propose to offer to the Federal Government tested for qualification in order that they may be eligible to be awarded contracts or orders for the products covered by this specification. The activity responsible for the Qualified Products List is OC-ALC/TICLA, TINKER AFB OK 73145-5990 and information pertaining to qualification of products may be obtained from that activity."

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 Number: 6615-F345