

INCH-POUND

MIL-I-27197C(USAF)
AMENDMENT 2
15 OCTOBER 1994
SUPERSEDING
AMENDMENT 1
16 OCTOBER 1987

MILITARY SPECIFICATION

INDICATOR AIRSPEED, MACH NUMBER
AND MAXIMUM ALLOWABLE SPEED

This amendment forms a part of MIL-I-27197C(USAF), dated 16 October 1987, and is approved for use with the Department of the Air Force and is available for use by all Departments and Agencies of the Department of Defense.

PAGE 1

1 1 Line 1, add "nonlighted and" between "covers" and "integrally "

1 2 Add "ME-4 Nonlighted, Dial Fluorescent, Luminescent Material Conforming to MIL-L-25142" at the end of the paragraph

Delete 2 1 1 and add "~~Specifications, 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 SPECIFICATIONS, Federal, delete "PPP-B-601" and " PPP-B-636" entirely . Add "PPP-B-1672, Boxes, Shipping, Reusable With Cushioning "

In the "Beneficial comments" Block, line three, delete "MMEDO" and add "TICLA" and line four, delete "73145" and add "73145-5990 "

PAGE 2

Under SPECIFICATIONS, Military, add "MIL-B-121, Barrier Material, Greaseproofed, Waterproofed, Flexible" and "MIL-L-25142, Luminescent Material, Fluorescent "

Under STANDARDS, Federal, add "FED-STD-101, Test Procedures For Packaging Materials "

Under STANDARDS, Military, delete MIL-STD-794, and MIL-STD-831 entirely Change MIL-STD-143 to MIL-STD-970 and add "MIL-STD-2073-1, DOD Material Procedures For Development And Application Of Packaging Requirements "

Delete paragraph that begins with, "(Copies of specifications, standards, handbooks, drawings, and publications " entirely and add "(Unless otherwise indicated, copies of federal and military specifications, standards, and handbooks are available from the Standardization Document Order Desk, Bldg 4D 700 Robbins Avenue, Philadelphia, PA 1911-5094) "

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FSC 6610

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Delete 2.2 entirely and 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 issues of the documents cited in the solicitation (see 6.2)

NASA Technical Note

D822

Tables of Airspeed, Altitude, and Mach Number Based
On Latest International Values For Atmospheric
Properties And Physical Constants

(Copies of the NASA document may be obtained from the National Aeronautics and Space Administration, Washington DC 20546) "

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 document takes precedence Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained "

3.1 Line three, delete "(see 4.4 and 6.4)" and add "(see 4.4 and 6.5) "

3.2 Line three, delete MIL-STD-143 and add "MIL-STD-970 "

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3.9 Add "The indicator shall incorporate parallel integral lighting circuit as shown on Figure 8 (AVU-8/A, AVU-8A/A, AVU-8B/A, AVU-8C/A)" at the end of the paragraph

PAGE 8

Add "3.11.1.1 Fluorescent-luminescent material (ME-4 only) The following markings shall be finished in fluorescent-luminescent material in accordance with MIL-L-25142, type I or III, as applicable The dimensions of the markings shall be as follows

	Height or Length Inch \pm 0.016	Width of Line or Graduation Inch \pm 0.005
Numerals on Indicated Airspeed	0.250	-----
Numerals on Mach Scale		
0.5 thru 1.6	0.156	-----
1.8 thru 2.2	0.125	-----
Graduation Corresponding to 100 Knot Increments	As Shown on Figure 4	
Graduation Corresponding to 50 Knot Increments		
Below 400 Knots (except 150)	0.219	0.030
Above 400 Knots	0.156	0.030
Graduations Corresponding to 150 Knot Increments	0.125	0.030
Graduations Corresponding to 10 Knot Increments	0.156	0.020
Graduations Corresponding to 0.10 Mach Increments	0.125	0.030
Graduations Corresponding to 0.05 Mach Increments	0.094	0.020
Lettering MACH NO	0.094	0.020
Lettering KNOTS X 100	0.094	0.020
Zero Graduation	0.125	0.020

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Lettering SET INDEX
Shaded Portion of Indicated Airspeed Pointer
Settable Index Pointer

0 078
As Shown on Figure 7
As Shown on Figure 7

0.020

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Add "3 21 Recycled and reclaimed material Recycled and reclaimed materials shall be encouraged to the maximum extent possible without jeopardizing the intended end use of the item "

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."

4 3 Line 1, Add "Unless otherwise specified all inspections shall be performed in accordance with the test conditions specified in 4 3 1 of this specification "

PAGE 10

Delete 4 4.2 entirely

PAGE 20

4 6.25 End of title, delete ")." and add. "ME-4)."

PAGE 21

Delete 4 6.27 entirely and add "4.6.27 Shelf-Life Test The "shelf-life" test will last for an eight (8) week period with Airspeed Indicators being tested every two (2) weeks The "shelf-life" test will consist of airspeed scale error, mach number scale error and maximum equivalent scale error; all performed as described in MIL-I-27197C, Section 4 6 at room temperature At each two (2) week period in the "shelf-life" test, the indicator will be subjected to and shall meet airspeed scale error, mach scale error, and maximum equivalent scale error tolerances and shall not vary from the original calibration readings by more than ± 2 knots for airspeed scale error and mach scale error, and ± 10 knots on maximum allowable pointers Between each two week test interval, the mechanism shall not be exercised other than that caused by normal ambient pressure vibrations The temperature shall remain essentially constant, however, normal room temperature variations will be permissible. Once the original scale error characteristics have been determined, re-calibration is not allowed during "shelf-life" tests "

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 IC-1 in accordance with MIL-P-116

5 1 2 Cleaning Item shall be cleaned in accordance with MIL-P-116 C-1 process

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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.

5.1.4 Level A Item shall be preserved in accordance with MIL-P-116 and MIL-STD-2073-1 to provide a method IC-1

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 MIL-P-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 MIL-B-121, barrier material, unless otherwise specified by the contracting activity. Unit containers shall be large enough to allow for application of sufficient cushioning/wrap material, between the item and unit container. Item Cushioning/wrap material shall be of sufficient density and thickness to protect the unit container from punctures. Intermediate/shipping containers shall be large enough to allow for the application of sufficient cushioning material, between the unit container and intermediate/shipping container. Cushioning material shall be of sufficient density and thickness to ensure shock transmission does not exceed peak values in G's established for the item.

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 conforming to PPP-B-1672, weather-resistant unless otherwise specified by the contracting activity. Exterior container shall be uniform shape, size, and minimum tare and cube, consistent with the protection required. Closure shall be in accordance with appropriate PPP-B-1672 procedure and contracting activity.

5.2.4 Level C Item will be packed in such a manner that will afford adequate protection against physical damage during 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 in accordance with special markings required by the contracting activity and MIL-STD-129.

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5.4 Inspection and test Test of methods of preservation shall be accomplished in accordance with section 4 of MIL-P-116 to ensure compliance with section 5 of this specification. Packaging tests shall be conducted in accordance with 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.)"

Delete "6.2 Ordering data Procurement documents should specify the following " and add "6.2 Acquisition requirements Acquisition documents must specify the following "

PAGE 23

Under 6.2, Add "(g) Issue of DODISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.1) "

Delete 6.5 entirely and add "6.5 Qualification With respect to products requiring qualification, awards will be made only for products which are, at the time of award of contract, qualified for inclusion in Qualified Products List

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whether or not such products have actually been tested by that date. The attention of the contractors is called to these requirements, and manufacturers are urged to arrange to have the products that they propose to offer to the Federal Government test for qualification in order that they may be eligible to be awarded contracts or purchase 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."

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Figure 1, Left hand side, add "(NOT ON ME-4)" after "DEUTSCH CONNECTOR."

Bottom of page, end of title delete, ")" and add "ME-4) "

PAGE 31

Add Figure 8, Page 31

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.

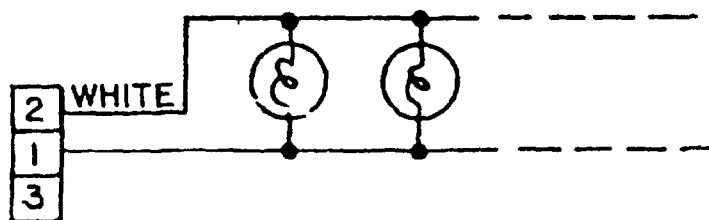
Custodian
AIR FORCE - 99

Reviewer activities
AIR FORCE - 11

Preparing activity
AIR FORCE -71

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DEUTSCH CONNECTOR DM 5600-3P, OR EQUAL

FIGURE 8 Lighting circuits

(AVU-8/A, AVU-8A/A, AVU-8B/A, AVU-8C/A)