

MIL-M-29440 (MC)  
20 January 1988

## MILITARY SPECIFICATION

### MODULE ASSEMBLY, WORKBENCH

This specification is approved for use within U.S. Marine Corps, Department of the Navy, and is available for use by all departments and agencies of the Department of Defense.

#### 1. SCOPE

1.1 Scope. This specification establishes the requirements for manufacture and acceptance of the Module Assembly, Workbench. This item is the only one of its type.

#### 2. APPLICABLE DOCUMENTS

##### 2.1 Government documents.

2.1.1 Specifications and standards. The following specifications and standards form a part of this specification to the extent specified herein. Unless otherwise specified, the issues of these documents shall be those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation.

#### SPECIFICATIONS

##### FEDERAL

L-P-508H	-	Plastic Sheet, Laminated, Decorative, and Nondecorative.
V-T-295	-	Thread, Nylon.
QQ-A-200/8	-	Aluminum Alloy 6061, Bar, Rod, Shapes, Tube and Wire, Extruded.
QQ-A-200/9	-	Aluminum Alloy Bar, Rod, Shapes, Tube and Wire, Extruded, 6063.

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Commandant of the Marine Corps, Headquarters Marine Corps (Code LMA-1), Washington, DC 20380 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A

FSC 7195

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

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QQ-A-225/8	-	Aluminum Alloy 6061, Bar, Rod, Wire and Special Shapes, Rolled, Drawn or Cold Finished.
QQ-A-250/8	-	Aluminum Alloy, 5052, Plate and Sheet.
QQ-S-781	-	Strapping, Steel and Seals.
MMM-A-181D	-	Adhesive, Phenol, Resorcinol, or Melamine Base.
PPP-B-601	-	Boxes, Wood, Cleated Plywood.
PPP-B-621	-	Box, Wood, Nailed and Lock-corner.

## MILITARY

MIL-P-116	-	Preservation, Methods of.
MIL-B-117	-	Bag, Sleeve and Tubing - Interior Packaging.
MIL-T-704	-	Treatment and Painting of Material.
MIL-W-4088	-	Webbing, Textile, Woven Nylon.
MIL-C-5541	-	Chemical Conversion Coatings on Aluminum Alloys.
MIL-E-6060	-	Envelope, Packaging, Water Vapor Proof, Flexible.
MIL-G-12803	-	Gasket Material, Non-metallic.
MIL-P-19834	-	Plate, Identification, Metal Foil, Adhesive Backed.
MIL-C-22750	-	Coating, Epoxy Polyamide.
MIL-W-45205	-	Welding, Gas Metal-Arc and Gas Tungsten-Arc, Aluminum Alloys Readily Weldable for Structures, Excluding Armor.
MIL-P-53022	-	Primer, Epoxy Coating, Corrosion Inhibiting, Lead and Chromate Free.

## STANDARDS

## FEDERAL

FED-STD-595	-	Federal Standard Colors.
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## MILITARY

MIL-STD-105	-	Sampling Procedures and Tables for Inspection by Attributes.
MIL-STD-129	-	Marking for Shipment and Storage.
MIL-STD-130	-	Identification Marking of U.S. Military Property.
MIL-STD-2073-1A	-	DoD Material Procedures for Development and Application of Packaging Requirements.

2.1.2 Other Government documents, drawings, and publications.  
The following other Government documents, drawings, and publications form a part of this specification to the extent specified herein. Unless otherwise specified, the issues shall be those in effect on the date of the solicitation.

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## DRAWINGS

U.S. Marine Corps Logistics Base, Albany, GA  
 82A5048A1200 - Module Assembly, Workbench  
 82A5048A1131 - Shelf, Tie Down  
 82A5050A0100 - Rail Assembly and Installation, Mounting,  
                     Floor  
 82A5050A0110 - Peg Assembly, Modular Alignment  
 82A5050A0132 - Bar, Lock  
 82A5050A0138 - Shaft, Latch  
 82A5050A0140 - Head, Latch  
 82A5050A0142 - Handle, Latch  
 82A5050A0144 - Latch  
 82A5050A0150 - Rail Assembly and Installation, Mounting, Wall  
 82A5050A0160 - Post Assembly, Mounting

(Copies of specifications, standards, handbooks, drawings, publications, and other government documents required by contractors in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting activity).

2.2 Other publications. The following document(s) form a part of this specification to the extent specified herein. Unless otherwise specified, the issues of the documents which are DOD adopted shall be those listed in the issue of the DODISS specified in the solicitation. Unless otherwise specified, the issues of documents not listed in the DODISS shall be the issue of the nongovernment documents which is current on the date of the solicitation.

## AMERICAN NATIONAL STANDARDS INSTITUTE

ANSI A208.1-79	- Mat-Formed Wood Particleboard
ANSI/ASTM F150-72	- Electrical Resistance of Conductive Resilient Flooring, Test Method for
ANSI/AWS A2.4-79	- Welding and Nondestructive Testing, Symbols
ANSI/AWS A3.0-85	- Welding Terms and Definitions

(Application for copies should be addressed to the American National Standards Institute, Inc., 1430 Broadway, New York, NY 10018.)

## AMERICAN SOCIETY FOR TESTING AND MATERIALS

ASTM D2559-84	- Adhesives for Structural Laminated Wood Products for Use Under Exterior (Wet Use) Exposure Conditions, Specification for
ASTM A108-81	- Steel Bars, Carbon, Cold Finished, Standard Quality



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3.4 Construction. Module Assembly, Workbench shall be of the construction and physical dimensions specified on drawing package 82A5048A1200 (see 2.1.2).

3.4.1 Frame assembly. The frame assembly shall be fabricated from Sheet, Aluminum Alloy 5052-H32, QQ-A-250/8; Angle, Aluminum Alloy 6061-T6, QQ-A-200/8; Rod, Aluminum Alloy 6061-T6, QQ-A-225/8; Bar, Aluminum Alloy 6061-T-6510, QQ-A-200/8; Aluminum Alloy 6063-T6, QQ-A-200/9; and shall be square in all directions within .010 inch per foot (see 4.4.2). All welds shall be in accordance with ANSI/AWS A3.0-85, A2.4-79 and MIL-W-45205, Class B (see 4.4.4). The frame assembly shall conform to specifications to such a degree of accuracy ensuring it will align to the peg and pin assemblies and lock using the swing latches as illustrated in the footprint drawing, Figure 1 (see 4.4.3).

3.4.2 Junction box assembly, 60 Hz 120 VAC.

a. Junction box subassembly and cover assembly. The junction box subassembly and cover assembly shall be fabricated from Aluminum Alloy 5052-H32, QQ-A-250/8. All welds shall be in accordance with ANSI/AWS A3.0-85, A2.4-79 and MIL-W-45205, Class B (see 4.4.4). Affixed to the front of the cover assembly shall be six decals made from .003 thick Aluminum Alloy Foil Photographically sensitized adhesive back in accordance with MIL-P-19834, Type I. Letter size shall be .145 inch with a .062 inch border on all sides, color shall be in accordance with MIL-P-19834, Style III (see 4.4.5). The junction box subassembly shall be securely bolted to the frame assembly in four places and the cover assembly shall be securely attached to the junction box subassembly using 15 screws (see 4.4.6).

b. Junction box, electrical. The junction box shall be wired in accordance with NFPA 70-84 National Electrical Code, with outlets 1J1, 2J1 and 3J1 supplied through CB1 and outlets 4J1 and 5J1 supplied through CB2 when inspected as specified in 4.4.7. The cable assembly shall have an overall length of 36.00 inches and shall not have continuity between pins (see 4.4.8).

3.4.3 Junction box assembly 400 Hz, 120 VAC, 28. VDC.

a. Junction box subassembly and cover assembly. The junction box subassembly and cover assembly shall be fabricated from Aluminum Alloy 5052-H32, QQ-A-250/8. Welds shall be in accordance with ANSI/AWS A3.0-85, A2.4-79 and MIL-W-45205, Class B (see 4.4.4). Affixed to the front of the cover assembly shall be six decals made from .003 thick Aluminum Alloy Foil Photographically sensitized adhesive back in accordance with MIL-P-19834, Type I. Letter size shall be .145 inch with a .062 inch border on all sides, color shall be in accordance with MIL-P-19834, Style III (see 4.4.9). The junction box assembly shall be securely bolted to the frame assembly in four places and the cover assembly securely attached using 18 screws (see 4.4.10).

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b. Junction box, electrical. The junction box shall be wired in accordance with NFPA 70-84 National Electric Code with exception to 400 Hz receptacles, wire as standard receptacles, 400 Hz outlets shall be supplied through CB1 (see 4.4.11). The 28 VDC cable assembly shall have an overall length of 34.00 inches and shall not have continuity between pins (see 4.4.12). The 400 Hz cable assembly shall have an overall length of 36.00 inches and shall not have continuity between pins (see 4.4.12).

3.4.4 Shelf assembly. The shelf, tie down, shall be in accordance with drawing 82A5048A1131. The Brackets shall be fabricated from Sheet, Aluminum Alloy, 5052-H32, .125 inch thick, QQ-A-250/8. The shelf shall be securely bolted to each bracket in seven places. Each bracket shall be securely bolted to the frame assembly in three places (see 4.4.13).

3.4.5 Drawer assembly, 7 inch. The drawer assembly, 7 inch and supports shall be fabricated from Sheet, Aluminum Alloy 5052-H32, QQ-A-250/8. All welds shall be in accordance with ANSI/AWS A3.0-85, A2.4-79 and MIL-W-45205, Class B (see 4.4.4). Each latch grip shall be installed on the front of the drawer using two screws. The slide drawer, extension Structural Members shall be fabricated from Aluminum Alloy with a minimum yield strength of 35,000 psi, slide ball raceways shall have a minimum ultimate tensile strength of 200,000 psi. The slide, drawer extension Component Parts shall be of 300 Series Stainless Steel per MIL-S-5059 or MIL-S-7720, Carbon Steel per QQ-S-633 and/or Aluminum Alloy. The slide drawer extension load rating (per pair) at 22 inch extension shall be 200 lbs. Each drawer support shall be securely bolted to the frame in three places. Each slide drawer, extension shall be securely screwed to the drawer support in eight places. The drawer will be securely screwed to the slide drawer extensions in twelve places. Installed the drawer shall operate smoothly and freely with no binding and close against the frame (see 4.4.14). Each 7 inch drawer assembly shall be capable of being interchanged for another (see 4.4.15).

3.4.6 Top assembly bench. The top, bench, shall be fabricated from substrate of medium density fiberboard, 45 lb density, Type 1, Grade B, Class 2 (CS236-66) Particle Board conforming to ANSI A 208.1-1979 Type 2 Class 2. The substrate shall be smooth well sanded and uniform in thickness (1.125 inches). The laminate applied to the top and edges shall be of anti-static Grade 47/HAP conforming to the performance requirements of Fed Spec L-P-508H, Style D, Type II, Class 1, Finish A, and NEMA Publication number LD3-1980, Type PF42. Top and edge laminate shall be .042 inch thick with .005-.006 surface, .005-.006 Conductive layer and .028-.030 Filler, Color shall conform to FED-STD-595, Color Chip No. 23711 semi-gloss. The bottom laminate shall be Grade-91 DACI backing sheet conforming to the performance requirements of Fed Spec L-P-508H, Style ND, Type IV and NEMA Publication No. LD3-



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1980, Type BK20; .020 inch thick and an electrical resistance to ground shall be a minimum of 10 megohms as measured in conformance with NFPA 56A and ANSI/ASTM F150-72 at 500 VDC, 68 degrees F, 50 percent RH. The adhesive shall be rigid set using Resorcinol G-1149-A/G1131-B conforming to ASTM D2559-72 and Fed Spec MMM-A-181D. Inserts shall be securely screwed to the top, bench in 11 places and the top, bench shall be securely screwed to the frame in eight places (see 4.4.16).

3.4.7 Strap assembly, tie down. The strap assembly, tie down shall be fabricated from Strap, Webbing, MIL-W-4088, Type II, Class I, 2500 lbs minimum strength, color Gray; Strap, Webbing MIL-W-4088, Type XXVII, Class I, 6500 lbs minimum strength, color Gray; sewn with Thread per Fed Spec V-T-295, Type II, Class A, Type B, color Black per FED-STD-595. Attaching hardware will consist of Rotating End Fitting; Plate, Threading; Hook, Flat; and Fastener, Flat Hook. Attaching hardware shall be Cold Rolled Steel, 300 lbs minimum strength with HD Zinc Plate Bronze Chromate Finish. The strap assembly shall be fabricated to have a minimum strength of 300 lbs (see 4.4.17).

3.4.8 Strap assembly. The strap assembly shall be made from Strap, Webbing, MIL-W-4088, Type XXVII, Class I, and Strap Webbing, Type II, Class I. The webbing color shall be Forest Green and all shall be fused to provide a smooth edge with the cut end all fused together (see 4.4.18).

3.4.9 Bracket mounting. The bracket mounting, shall be fabricated of Angle, Aluminum Alloy, 6061-T6, QQ-A-200/8 and shall be securely bolted to the frame in four places to such a degree of accuracy ensuring it will align to the footprint as described in Figure 1 (see 4.4.19).

3.4.10 Decal. The decal shall be fabricated from .003 inch thick aluminum alloy foil, photographically sensitized, adhesive back in accordance with MIL-P-19834, Type I. Requirements and methods of marking the decal shall be in accordance with MIL-STD-130. Unless otherwise specified all characters shall be .093 inch high on finished decal, color shall be in accordance with MIL-P-19834, Style III (see 4.4.20). It shall be attached to the assembled module assembly, workbench 2.50 inches in from the left outer edge and 3.50 inches down from the top.

### 3.5 Finish.

3.5.1 Cleaning. Prior to painting metal surfaces shall be cleaned and treated per MIL-T-704, Type G, and MIL-C-5541, Class 3.

3.5.2 Priming. After metal surfaces have been cleaned as required they shall be primed per MIL-P-53022, with a minimum dry film thickness of .001 inch in one coat.

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3.5.3 Painting. Final finish painting shall have a minimum dry coat film thickness of .0018 inch in two coats per MIL-C-22750, Type II, Color No. 24533 per FED-STD-595 (see 4.4.23).

3.6 Interchangeability. All parts having the same part number shall be functionally and dimensionally interchangeable. Interchangeable parts are defined as two or more like parts possessing such functional and physical characteristics as to be equivalent in performance and durability, and capable of being exchanged one for the other without alteration of the parts themselves or adjoining parts and without selection for fit or performance.

3.7 Workmanship. The Module Assembly, Workbench shall meet all design, fabrication, assembly and finish requirements of this specification. Particular attention shall be given to: removal of burrs and sharp edges; accuracy of dimensions; thoroughness of welding; painting; alignment; tightness of screws, bolts, and rivets. Failure to ensure these measures have been taken will be considered adequate basis for rejection of items being of inferior quality for the purpose intended.

#### 4. QUALITY ASSURANCE PROVISIONS

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

4.1.1 Responsibility for compliance. All items must meet all requirements of section 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 assuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling in quality conformance does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to acceptance of defective material.

4.1.2 Test equipment and inspection facilities. When specified (see 6.2) the contractor shall insure that test and inspection facilities of sufficient accuracy, quality and quantity are established and maintained to permit performance of required inspections.



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4.2 Classification of inspections. The inspections specified herein are classified as follows:

a. First article inspection. First article inspection consists of examinations and tests performed on samples which are representative of the production item after award of a contract to determine that the production item conforms to the requirements of this specification (see 4.3).

b. Quality conformance inspection. Quality conformance inspection consists of examinations and tests performed on individual products to determine conformance of the products with the requirements set forth in this specification (see 4.4).

c. Visual inspection. Visual inspection consists of examinations to determine conformance with the requirements set forth in this specification (see 4.5).

4.3 First article inspection. The first article inspection of the Module Assembly, Workbench shall consist of examination and tests for all the requirements of this specification.

4.3.1 First article sample. Unless otherwise specified as soon as practical after the award of the contract, the contractor shall submit quantity(s) specified in the contract for Module Assembly, Workbench. The modules shall be representative of the construction, workmanship, components, and materials to be used during production. Approval of the first article inspection samples or the waiving of the first article inspection does not preclude the requirements for performing the quality conformance inspection. The first article inspection samples shall be furnished to the Government as directed by the Contracting Officer (see 6.2).

4.3.2 Sample disposition. Upon completion of the first article inspection, sample(s) will be disposed of in accordance with Government shipping instructions.

4.3.3 First article inspection routine. First article inspection shall consist of those items listed in Table I.

4.4 Quality conformance inspection. Quality conformance inspections shall be conducted in accordance with MIL-STD-105 and consist of those items listed in Table I.

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TABLE I. Test and Inspection

Requirement	Requirement Paragraph	Test Paragraph
Condition and certification of materials	3.4.1, 3.4.2 3.4.3, 3.4.4 3.4.5, 3.4.9	4.4.1
Dimensional check of frame assembly	3.4.1	4.4.2
Verification Frame Assembly fits footprint of Figure 1	3.4.1	4.4.3
Welding	3.4.1, 3.4.2 3.4.3, 3.4.5	4.4.4
Junction box assembly, 60 Hz 120 VAC (decals)	3.4.2	4.4.5
Junction box assembly, 60 Hz 120 VAC (attachment)	3.4.2	4.4.6
Junction box assembly, 60 Hz 120 VAC (wiring)	3.4.2	4.4.7
Junction box assembly, 60 Hz 120 VAC (cable)	3.4.2	4.4.8
Junction box assembly, 400 Hz 120 VAC, 28 VDC (decals)	3.4.3	4.4.9
Junction box assembly, 400 Hz 120 VAC, 28 VDC (attachment)	3.4.3	4.4.10
Junction box assembly, 400 Hz 120 VAC, 28 VDC (wiring)	3.4.3	4.4.11
Junction box assembly, 400 Hz 120 VAC, 28 VDC (cables)	3.4.3	4.4.12
Shelf assembly	3.4.4	4.4.13
Drawer assembly, 7 inch	3.4.5	4.4.14
Interchangeability	3.4.5, 3.6	4.4.15

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TABLE I. Test and Inspection (Con't)

Requirement	Requirement Paragraph	Test Paragraph
Top assembly, bench	3.4.6	4.4.16
Strap assembly, tiedown	3.4.7	4.4.17
Strap assembly	3.4.8	4.4.18
Bracket mounting	3.4.9	4.4.19
Decal	3.4.10	4.4.20
Cleaning of aluminum	3.5.1	4.4.21
Priming	3.5.2	4.4.22
Painting	3.5.3	4.4.23
Packaging	5.2	4.4.24
Marking	5.3	4.4.25
Hardware	3.4.2, 3.4.3 3.4.4, 3.4.6	4.4.26

4.4.1 Condition and certification of material. Material used in construction of the Module Assembly, Workbench (sheet, roll, and bar aluminum) shall be certified to be of the specified material that has no etching, scaling or pitting. Fabricated pieces shall not have sharp edges or burrs. Material shall not be cracked, malformed or split.

4.4.2 Frame dimensions. The frame assembly shall be measured and shall be square in all directions to within .010 inch per foot.

4.4.3 Footprint fit. The frame assembly shall be inspected for alignment to the peg and pin assemblies and lock, using the swing latches as illustrated in the footprint drawing Figure 1.

4.4.4 Welding. Welding areas shall be inspected for cleanliness and be free of dirt, sand, scale and oil prior to welding. All welds shall be inspected for compliance with ANSI/AWS A3.0-85, A2.4-79, and MIL-W-45205 Class B.

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4.4.5 Junction box assembly, 60 Hz 120 VAC (decals). The decals shall be inspected for attachment as specified on the drawings and color to be in accordance with MIL-P-19834, Style III.

4.4.6 Junction box assembly, 60 Hz 120 VAC (attachment). The junction box assembly shall be inspected for secure attachment to the frame assembly in four places and the cover assembly to be securely attached to the junction box assembly using 15 screws.

4.4.7 Junction box assembly, 60 Hz 120 VAC (wiring). The junction box wiring shall be inspected for compliance with NFPA 70-84 National Electrical Code. Outlets 1J1, 2J1 and 3J1 shall be supplied through CB1 and outlets 4J1 and 5J1 supplied through CB2.

4.4.8 Junction box assembly, 60 Hz 120 VAC (cable). The cable assembly shall be measured to be 36.00 inches in length and not have continuity between pins.

4.4.9 Junction box assembly, 400 Hz, 120 VAC, 28 VDC (decals). The decals shall be inspected for attachment as specified on the drawings and color to be in accordance with MIL-P-19834, Style III.

4.4.10 Junction box assembly, 400 Hz, 120 VAC, 28 VDC (attachment). The junction box assembly shall be inspected to be securely bolted to the frame assembly in four places and the cover assembly securely attached with 18 screws.

4.4.11 Junction box assembly, 400 Hz, 120 VAC, 28 VDC (wiring). The junction box wiring shall be inspected for compliance with NFPA 70-84 National Electric Code with exception to 400 Hz receptacles, wire as standard receptacles, with 400 Hz receptacles supplied through CB1.

4.4.12 Junction box assembly, 400 Hz, 120 VAC, 28 VDC (cables). The cable assembly supplying 400 Hz shall be measured to be 36.00 inches. The cable assembly supplying 28 VDC shall be measured to be 34.00 inches in length and there shall not be continuity between pins of either cable.

4.4.13 Shelf assembly. The shelf shall be inspected for secure attachment to each bracket in seven places with each bracket securely bolted to the frame assembly in three places.

4.4.14 Drawer assembly, 7 inch. The drawer assembly shall be inspected for smooth and free operation with no binding with the drawer closing against the frame.

4.4.15 Interchangeability. Each 7 inch drawer assembly shall be interchanged for another.

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4.4.16 Top assembly, bench. The top assembly bench shall be inspected to have 11 inserts installed and be securely screwed to the frame assembly in eight places.

4.4.17 Strap assembly, tie down. The strap assembly tie down shall be tested for a minimum strength of 300 lbs.

4.4.18 Strap assembly. The strap assembly shall be inspected for compliance with 3.4.8.

4.4.19 Bracket mounting. The bracket mounting shall be inspected for secure attachment to the frame to such a degree of accuracy to align with the footprint as described in Figure 1.

4.4.20 Decal. The decal shall be inspected for attachment to the module assembly, workbench as specified on the drawings and color to be in accordance with MIL-P-19834, Style III.

4.4.21 Cleaning of aluminum. Cleaning of aluminum surfaces prior to painting shall be inspected for compliance with MIL-T-704, Type G, and MIL-C-5541, Class 3.

4.4.22 Priming. Priming shall be inspected for compliance with MIL-P-53022.

4.4.23 Painting. Painting of the Module Assembly, Workbench, shall be inspected for compliance with MIL-C-22750, Type II, Color No. 24533 per FED-STD-595 with final finish coat having a minimum dry coat thickness of .0018 inch in two coats. Coatings shall be inspected to have a level adherent continuous and uniform film without runs, wrinkles, streaks, or areas of no film.

4.4.24 Packaging. Packaging shall be inspected for conformance with MIL-STD-2073-1A.

4.4.25 Marking. Marking on the shipping container shall be inspected for compliance with MIL-STD-129.

4.4.26 Hardware. All hardware shall be inspected to be in place and securely fastened.

4.5 Visual inspection. The Module Assembly, Workbench, shall be examined for defects listed in Table II. The defects shall be classified as specified in Table II.

## 5. PACKAGING

5.1 Preservation. Preservation shall be level A in accordance with MIL-STD-2073-1A.

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TABLE II. Classification of Defects for Visual Inspection

Defect	Classification	
	Major	Minor
Frame or components misaligned	X	
Welds cracked or incomplete	X	
Metal components dented, misshaped, distorted or otherwise defective	X	
Sharp burrs or metal slivers	X	
	Major	Minor
Hardware missing	X	<u>1/</u>
Hardware not securely fastened		X
Decal mounted incorrectly		X

1/ Major when it affects the strength of attachment; otherwise, it is to be classified as a minor defect.

5.1.1 Unit packs. Each module shall be individually unit packed in accordance with submethod 1A-16 (Floating Bag Sealed), of MIL-P-116. Modules preserved, wrapped, and cushioned as required in paragraph 3.6.3 of MIL-P-116, shall be enclosed in a sealed bag conforming to MIL-B-117, type I or II; class E, F, or G, Style 1 or 2. Bags in accordance with MIL-E-6060 shall be used for sizes larger than can be made in accordance with MIL-B-117. The bag shall be provided with gasketed holes to permit the installation of the barrier over and around the fasteners used to secure the item(s) to interior supports or to one face of the container. Gaskets shall be attached to the barrier with adhesive. Unless otherwise specified, material for gaskets shall conform to MIL-G-12803 (see paragraph 6.2.1 (g)). Material for gaskets shall not contain asbestos.

5.2 Packing. Packing shall be level B in accordance with MIL-STD-2073-1A.

5.2.1 Level B. Modules, preserved as specified in 5.1, shall be packed in wood containers conforming to PPP-B-601, overseas type of PPP-B-621, class 2. Closure and strapping shall be in accordance with the applicable container specification except that metal strapping shall conform to QQ-S-781, type I, finish A.



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5.3 Marking. In addition to any special marking required by the contract or order, shipping containers shall be marked in accordance with MIL-STD-129.

## 6. NOTES

6.1 Intended use. The Module Assembly, Workbench and other modules will be utilized in furnishing an Electronic Maintenance Complex (EMC) which will support a given mission. The number and type of modules installed in any EMC or group of EMCs, at any given time, will depend directly on the user's immediate needs. The standard configuration for this module provides four seven inch drawers, and a shelf over the work area for placing test equipment. It also provides ten outlets for 120 volts, 60 Hz single phase power, six outlets for 120 volts, 400 Hz single phase power and two connections for 28 V dc.

6.1.1 Configuration. The Module Assembly, Workbench has a standard configuration of four seven inch drawer assemblies. However one 14 inch drawer assembly may be installed to replace two seven inch drawer assemblies, additionally two 3.50 inch drawer assemblies may be installed to replace a seven inch drawer assembly. One safe may be installed to replace one 14 inch drawer assembly.

6.2 Ordering data.

6.2.1 Acquisition requirements. Procurement documents shall specify the following:

- a. Title, number, and date of this specification.
- b. Quantity desired.
- c. When first article testing is required (see 3.1).
- d. When test equipment and inspection facilities are required (see 4.1.2).
- e. When quality conformance testing is required (see 4.4).
- f. Name and address of the first article inspection facility.
- g. Level of preservation, packaging, and packing required (see section 5).
- h. Whether any special markings are required.

6.3 Data requirements. When this specification is used in an acquisition which incorporates a DD Form 1423, Contract Data Requirements List (CDRL) the data requirements identified below shall be developed as specified by an approved Data Item Description

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(DD Form 1664) and delivered in accordance with the approved CDRL incorporated into the contract. When the provisions of DOD FAR Supplement, Part 27, Sub-Part 27.410-6 are invoked and the DD Form 1423 is not used, the data specified below shall be delivered by the contractor in accordance with the contract or order requirements. Deliverable data required by this specification is cited in the following paragraphs.

Data Requirements	Applicable DID Number	Options
First Article Inspection Procedure	DI-T-4901	-----
First Article Inspection Report	DI-T-4902	-----
Production/Acceptance Inspection Procedures	DI-T-4903	-----
Production Inspection Report	DI-T-4904	-----

(Copies of DID's required by contractors in connection with specific acquisition functions should be obtained from the Naval Publications and Forms Center or as directed by the contracting officer.).

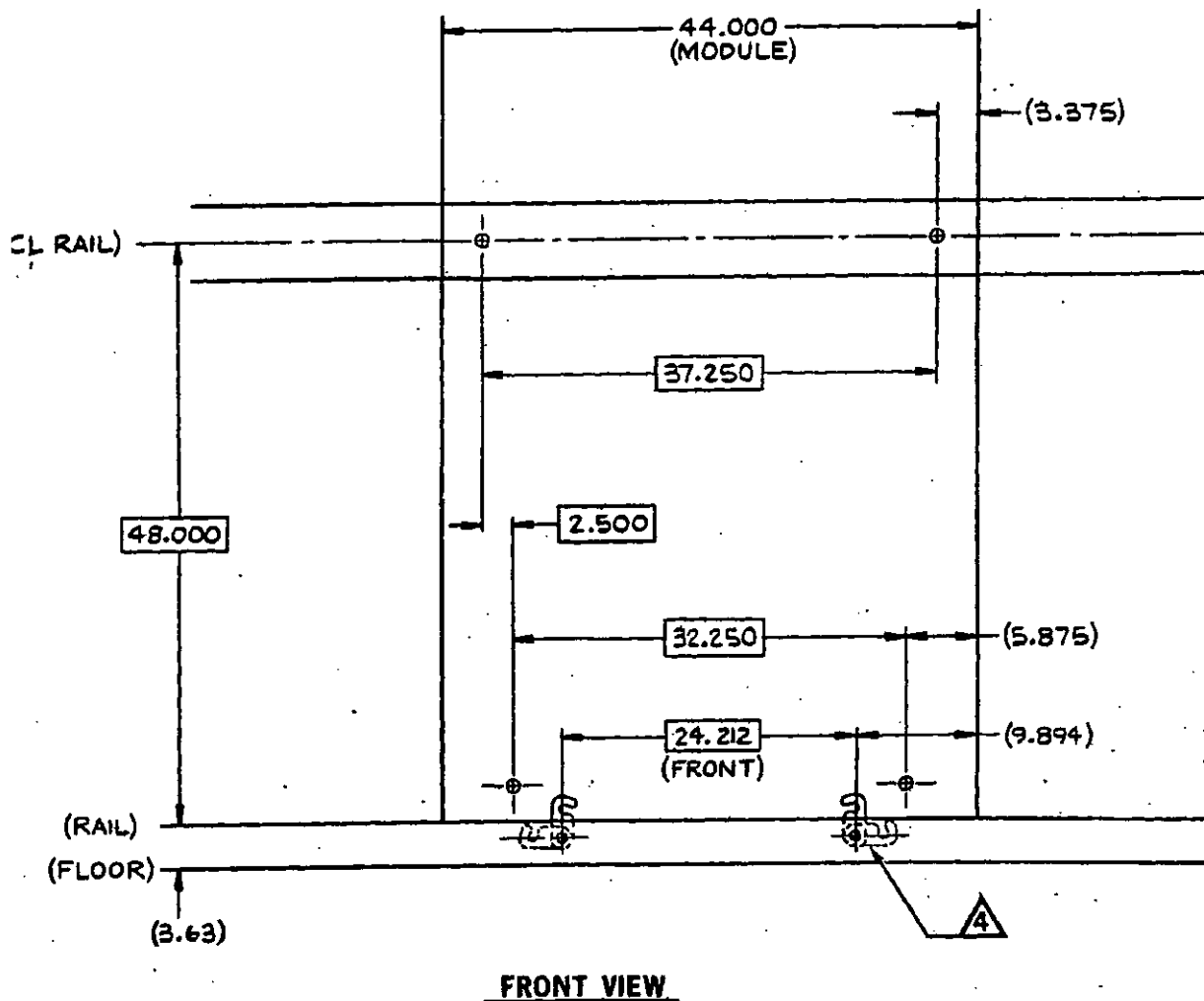
**6.4 First article.** The first article is to be examined and tested for approval at the contractor's plant or at an independent commercial testing laboratory acceptable to the procuring activity. First article tests shall be witnessed by a Government Representative of the procuring activity. Approval of first articles shall be by the procurement contracting officer.

**6.5 Subject term (key word) listing.** The following subject term (key word) listing is furnished for retrieval searches.

Assembly, drawer  
 Assembly, junction box, 60 Hz, 120V AC  
 Assembly, junction box, 400 Hz, 120V AC, 28V DC  
 Assembly, module, workbench  
 Assembly, shelf  
 Assembly, strap  
 Assembly, strap, tie down  
 Assembly, top, bench

Preparing activity:  
 Navy-MC  
 Project No. 7195-N104

MIL-M-29440 (MC)

**NOTES:**

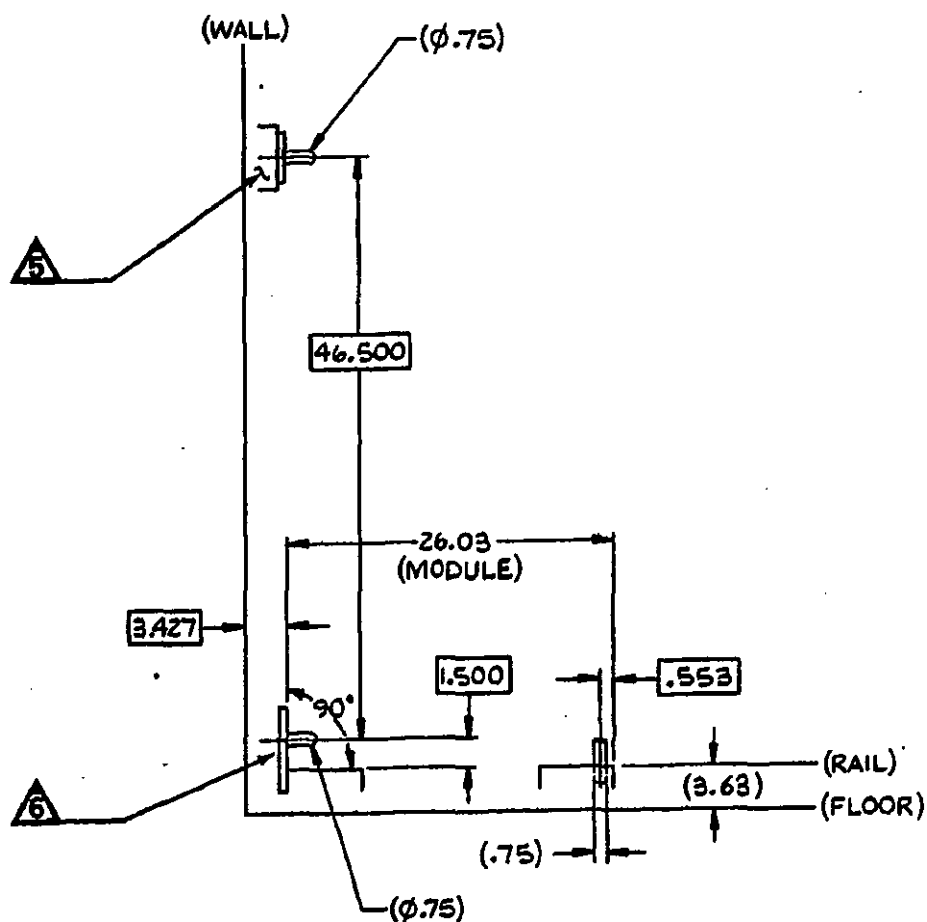
1. Dimensions are in inches.
2. Unless otherwise specified, tolerance is .XX  $\pm$  .03, XXX  $\pm$  .010.
3. Perpendicularity equals  $\pm 1^\circ$ .

**4** REF DWGS: 82A5050A0100 (RAIL ASSEMBLY AND INSTALLATION, MOUNTING, FLOOR)

82A5050A0132 (BAR, LOCK)  
 82A5050A0138 (SHAFT, LATCH)  
 82A5050A0140 (HEAD, LATCH)  
 82A5050A0142 (HANDLE, LATCH)  
 82A5050A0144 (LATCH)

Figure 1. (Page 1 of 2)  
 Module Assembly Footprint

MIL-M-29440 (MC)

SIDE VIEW

- 5 REF DWGS: 82A5050A0150 (RAIL ASSEMBLY AND INSTALLATION, MOUNTING, WALL)  
 82A5050A0160 (POST ASSEMBLY, MOUNTING)  
 6 REF DWGS: 82A5050A0100 (RAIL ASSEMBLY AND INSTALLATION, MOUNTING, FLOOR)  
 82A5050A0110 (PEG ASSEMBLY, MODULAR ALIGNMENT)

Figure 1. (Page 2 of 2)  
Module Assembly Footprint