MIL-R-38957C(USAF)
18 April 1973

SUPERSEDING
MIL-R-38957B(USAF)
30 April 1969

MILITARY SPECIFICATION

RACK, BOMB EJECTOR, AIRCRAFT MAU-40/A

*1. SCOPE

1.1 Scope. This specification covers the requirements for one type of equipment designated as Rack, Bomb Ejector, Aircraft MAU-40/A, hereafter referred to as the rack, for carriage and release (either freefall or forced ejection) of stores up to and including the 5000 pound blass.

*2. APPLICABLE DOCUMENTS

2.1 The following documents, of the issue in effect on the date of invitation for bids, form a part of this specification to the extent specified herein.

SPECIFICATIONS

Federal

PPP-B-601	Boxes, Wood, Cleated-Plywood
PPP-B-636	Boxes, Shipping, Fiberboard
PPP-C-843	Cushioning Material, Cellulose

Military

MIL-P-116	Preservation, Methods Of
MIL-D-1000	Drawings, Engineering and Associated Lists
MIL-T-7743	Testing, Store Suspension Equipment, General Specification For
MIL-Q-9858	Quality Control Systems Requirements
MIL-C-45662	Calibration System Requirements

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STANDARDS

Military

MIL-STD-129	Marking for Shipment and Storage
MIL-STD-130	Identification Marking of U. S. Military Property
MIL-STD-143	Specifications and Standards; Order of Precedence for the Selection of
MIL-STD-202	Test Methods for Electronic and Electrical Component Parts
MIL-STD-785	Requirements for Reliability Program (For Systems and Equipment)
MIL-STD-810	Environmental Test Methods for Aerospace and Ground Equipment
MIL-STD-1186	Blocking, and Waterproofing; with Appropriate Test Methods

DRAWINGS

Air Force

64J13000	Rack, Bomb Ejector, Aircraft MAU-40/A, Assembly of
64J13155	Electrical Assembly and Schematic, 14 Inch and 30 Inch Bomb Ejector Rack

(Copies of specifications, standards, drawings, and publications required by suppliers in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

3. REQUIREMENTS

*3.1 Qualification. The racks furnished under this specification shall be products that have been tested and passed the qualification tests specified herein, and have been listed or approved for listing on the applicable qualified products list at the time set for opening of bids.

3.2 Components.

3.2.1 Selection of materials. Specifications and standards of all materials and parts, and Government certification and approval of processes and equipment which are not specifically designated herein and which are necessary for the execution of this specification, shall be selected in accordance with MIL-STD-143.

3.2.2 Weight reduction. The contractor shall make every effort to hold to a minimum the equipment's over-all weight without impairing the function, operation or durability. All changes that are required to accomplish weight reduction shall be subject to written approval by the procuring agency prior to incorporation.

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3.3 Design and construction.

3.3.1 The rack shall be constructed in conformance to drawing 64J13000 and subsidiary drawings.

3.3.2 Interchangeability. All parts having the same number shall be directly and completely interchangeable with each other with respect to installation and performance. The rack shall be completely interchangeable from aircraft to aircraft. When parts are not interchangeable, the criteria listed in MIL-D-1000 shall apply and new drawings shall be prepared as required.

3.4 *Performance. The rack shall be capable of suspending and releasing* stores by means of a cartridge-actuated mechanism which shall allow either a freefall drop or forced ejection of all stores up to and including the 5000 pound class having 14 or 30 inch lug spacing and a diameter between 10.70 and 33 inches. The rack is designed for dive, horizontal, and other type bombing.

3.4.1 Forced Ejection. When forced ejection of the store is desired, the velocity of store, reaction forces and the flight attitude of the store shall be controlled by orifices which are placed in the gas system and which meter the flow of gases to the ejection pistons.

*3.4.2 Conventional weapon arming control. The nose, center, and tail solenoid operated arming controls shall operate from an 18 to 30 vdc power supply and shall each draw a maximum of 0.15 amperes continuously when energized at 24 vdc. Each control shall be capable of receiving and holding all standard arming wire loops. Each control shall be selectively capable of providing for an unarmed release or ejection, or armed release or ejection, of stores weighing from 100 pounds through the 5000 pound class.

3.4.3 Life. The rack shall function satisfactorily for 250 firings.

3.4.4 Reliability. The contractor shall initiate and maintain a reliability program in accordance with MIL-STD-785. This program shall be subject to modification by the procuring activity.

3.4.4.1 Reliability levels. The following reliability levels shall be achieved and demonstrated by the contractor:

a. Inadvertent release. With proper adjustment of the hook release mechanism, there shall be no inadvertent release during the design service life of the rack (250 firings under service conditions).

b. Release performance requirements. With proper maintenance and replacement of parts as required per maintenance technical order, the achieved rate of failure shall be no failures in 250 firings under service conditions, excluding cartridge failure.

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c. Reliability failure. The bomb rack shall be constructed as specified herein and successfully complete the test of paragraph 4.7 "Test Methods," of this specification with no failures as defined herein preventing satisfactory performance. Reliability of 98.0 per cent for a 2-hour estimated mission time with Mean Time Between Failure (MTBF) value of 100 hours is required. Compliance will be acceptably demonstrated at 90 per cent confidence level by 440 hours or more of total qualification testing time with no uncorrected failures.

3.5 Environmental requirements. The rack shall be capable of proper operation during or after, as applicable, the following environmental conditions:

a. Temperature from -53.9°C (-65°F) to +93.3°C (200°F).

b. Humidity up to 95 per cent, relative.

c. Salt spray incident to use, storage or transportation near or on a large body of salt water.

d. Icing conditions incident to service use.

e. Sand and dust likely to be encountered under desert conditions.

f. Vibration incident to flight, transportation and handling.

g. Shock incident to flight, transportation and handling.

3.6 Identification or product. The rack and all component parts thereof shall be marked for identification in accordance with MIL-STD-130.

*3.7 Government furnished property. When specified in the contract, the Government will furnish the following to the contractor, upon his request, for use in testing the Rack, Bomb Ejector, Aircraft MAU-40/A.

Item Number	Part Number	Description of Item	Quantity
1	P7877-1	Cartridge, Bomb Ejection, ARD 446-1	As stated in contract
2	10-3400	Cartridge, Bomb Ejection, ARD 863-1	As stated in contract
3	67F14000	Cartridge, Bomb Ejection, CCU-1/B	As stated in contract

3.8 Workmanship. The rack shall be fabricated and finished in a manner which will ensure that the criteria of appearance, fit, smoothness of operation, and adherence to specified tolerances are observed. These criteria must apply to all external non-functioning parts, such as nameplates, as well as to functional parts.

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4. QUALITY ASSURANCE

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified, the supplier may utilize his own facilities or any commercial laboratory acceptable to the qualifying activity. 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.

4.2 Classification of tests. The inspection and testing of the rack shall be as follows:

a. Qualification Tests

b. Acceptance Tests

4.3 Qualification testing.

*4.3.1 Testing. Qualification testing of preproduction rack(s) shall be performed by an independent laboratory acceptable to the activity responsible for the Qualified Products List (See paragraph 6.8). Racks shall have been produced with manufacturing equipment and procedures normally used in production.

*4.3.2 Qualification test reports. Qualification data shall be prepared and submitted for evaluation in accordance with the requirements of the procuring activity.

*4.3.3 Qualification test requirements. Qualification tests shall consist of all tests specified herein under "4.7 Test methods" as listed in Table I.

4.4 Acceptance tests. Acceptance testing shall consist of the following:

a. Individual tests

b. Sampling tests

4.4.1 Individual tests. Each rack shall be subjected to the individual tests as listed in Table I, except as otherwise specified.

4.4.2 Sampling plan and tests.

4.4.2.1 Sampling plan. One sample shall be selected at random by the quality assurance representative from each 200 production racks. Prior to being subjected to the sampling tests, the sample racks shall have passed the individual tests.

4.4.2.2 Sampling tests. Sampling tests shall consist of the sampling tests shown in Table I.

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TABLE I

TEST	REQUIREMENT PARAGRAPH	TEST PARAGRAPH	QUALIFICATION TEST	INDIVIDUAL TEST	SAMPLING TEST
Examination of Product	3.3, 3.6, 3.8	4.7.1	X	X	
Conformance to Drawings	3.3 3.8	4.7.2	X	X	
Static Load Tests	3.3	4.7.3	X		X
*Functional Test	3.4	4.7.4	X	X	
Sympathetic Firing Test	3.4	4.7.5	X	X	
Reliability Life Test	3.4	4.7.6	X		X
Environmental Tests	3.5	4.7.7			
High Temperature Test	3.5.a	4.7.7.1	X		X
Humidity Test	3.5.b	4.7.7.2	X		
Salt Fog Test	3.5.c	4.7.7.3	X		X
Icing Conditions Test	3.5.d	4.7.7.4	X		X
Sand and Dust Test	3.5.e	4.7.7.5	X		
Vibration Test	3.5.f	4.7.7.6	X		X
Shock Test	3.5.g	4.7.7.7	X		X
Electrical Tests	3.4	4.7.8	X	X	X
		4.7.8.1	X	X	X

*These tests may be performed concurrently with the Reliability Life Test in Qualification Testing

4.4.3 Rejection and retest. When the sample rack fails to meet the specified test, no rack on hand or later produced shall be accepted until the extent and cause of failure are determined. The failure shall be corrected and the unit shall demonstrate compliance by satisfactorily passing the failed test before acceptance of on-hand or later produced units.

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4.4.4 Defects in items already accepted. The investigation of a test failure could indicate that defects may exist in items already accepted. If so, the contractor shall fully advise the procuring activity of all defects likely to be found and methods of correcting them.

4.5 Test conditions. Test conditions shall be as specified in each specific test under "4.7 Test methods."

4.6 Quality control requirements. The contractor shall provide and maintain a quality control system acceptable to the government for the equipment covered by this specification. The system of quality control shall be in accordance with Specification MIL-Q-9858.

*4.6.1 Quality inspection equipment and facilities. Inspection equipment and facilities shall be of sufficient accuracy, quality, and quantity to permit performance of the required inspection. The supplier shall establish and maintain a calibration system in accordance with MIL-C-45662.

4.7 Test methods.

4.7.1 Examination of product. Prior to installation of the left side plate each rack shall be examined visually to determine compliance with all requirements of this specification for which tests are not specified. Failure to comply with all requirements shall be cause for rejection.

4.7.2 Conformance to drawings. Each rack shall be inspected to determine conformance to the engineering drawings, subsidiary drawings and specifications and standards referenced therein. Failure to conform to these criteria shall be cause for rejection.

4.7.3 Static load tests.

NOTE: Tolerances for all loads applied in the static load tests shall be ± 3 per cent.

4.7.3.1 Yield load tests.

4.7.3.1.1 Thirty-inch suspension

*4.7.3.1.1.1 Test setup. The rack shall be installed in a fixture capable of withstanding the loads specified in the test procedures. This fixture shall be rigidly constructed in a manner such that vertical deflection of the bomb rack shall not exceed 1/2 inch during performance of the firing tests specified in the Functional test. Pins or bolts for this installation shall have a minimum ultimate tensile strength of 160,000 psi. A 2000 pound simulated store as shown in Figure 1 shall be installed on the 30-inch hooks of the rack. The set of swaybraces at each end of the rack shall be torqued to a total of 840 + 50 inch pounds. The torque shall be applied incrementally by turning each bolt of a set approximately the same number of turns.

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4.7.3.1.1.2 Test procedure. The yield load test of the rack shall consist of the simultaneous imposition of loads for each condition along or about, as applicable, the axes shown in Figure 1. For each condition the loads shall first be imposed in increments of 10 per cent of design load until 100 per cent of design load is reached, then in increments of 5 per cent of design load until 115 per cent of design load is reached. The loads shall be held at each per cent increment for three minutes before proceeding to the next per cent increment after 60 per cent of the design load is attained. The rate of loading shall not exceed 5 per cent of the design loads per second. When a load of 115 per cent of design load has been reached and held for three minutes, the load shall be relieved to zero and the rack inspected. The simulated store shall be manually released and the position of the rack in the fixture shall be reversed. Test setup and procedures shall be repeated. Any permanent deformation shall be cause for rejection. Design loads shall be as shown in Table II.

TABLE II

DESIGN LOADS

30 INCH HOOKS

CONDITION NUMBER	P_xLbs	P_yLbs	P_zLbs	M_xIn-Lbs	M_yIn-Lbs	M_zIn-Lbs
1	887	2440	-11933	4473	-88867	302533
2	2000	1633	-12600	0	-214000	231333
3	2000	17933	-12600	0	-256800	213600
4	193	4687	-10800	4300	-21133	-301200

Reference axes and positive directions of those axes are shown in Figure 1.

4.7.3.1.2 Fourteen inch suspension.

4.7.3.1.2.1 Test setup. Test setup shall be as specified for the 30-inch suspension except that the simulated store shall be suspended on the 14-inch hooks of the rack as shown in Figure 2.

4.7.3.1.2.2 Test procedure. The test procedure shall be as specified for the 30-inch suspension. Design loads shall be as shown in Table III. The rejection criteria for the 30-inch suspension also applies to the 14-inch shspension.

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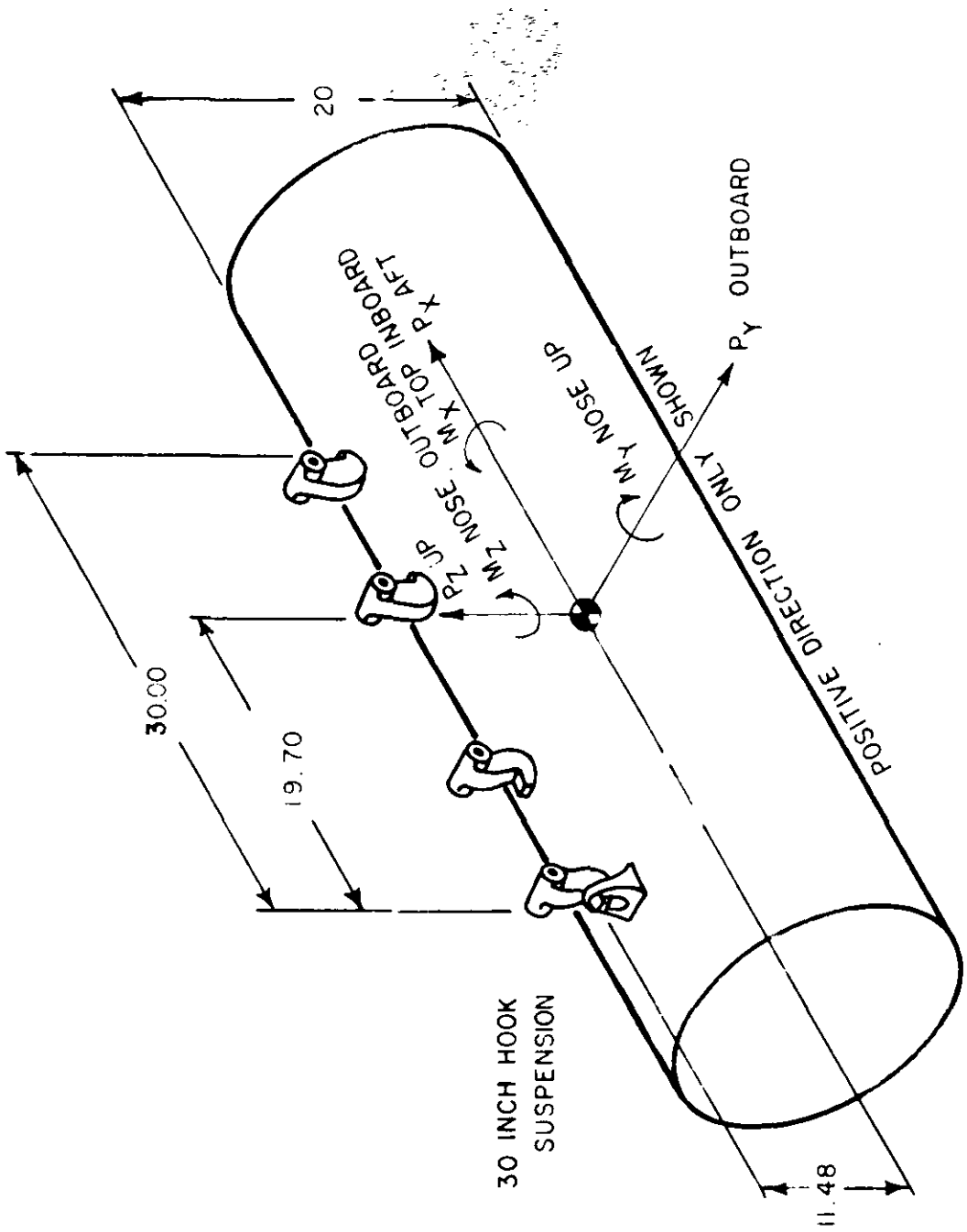


FIGURE 1 LOCATION AND DIRECTION OF LOADS

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TABLE III

14 INCH HOOKS

CONDITION NUMBER	P_xLbs	P_yLbs	P_zLbs	M_xIn-Lbs	M_yIn-Lbs	M_zIn-Lbs
1	350	5610	-3220	10000	-28400	45280
2	240	6740	-3840	15800	-23000	31340
3	350	6975	-4170	16800	-21700	31000
4	670	2935	-4000	0	-125300	83500

4.7.3.2 Ultimate strength test.

4.7.3.2.1 Thirty inch suspension.

4.7.3.2.1.1 Test setup. The test setup for this test shall be as specified for the YIELD LOAD TEST.

4.7.3.2.1.2 Test procedure. Test procedure shall be as specified for the YIELD LOAD TEST up to 115 per cent of the design load, except that after 115 per cent of the design load has been reached, loading shall continue in 5 per cent increments of the design load up to 150 per cent of the design load. After 150 per cent of the design load has been reached and held for three minutes, the load shall be reduced to zero and the rack inspected. The rack shall be tested in one direction only. Any breakage during loading up to and including 150 per cent of design loads shall be cause for rejection. Design loads shall be as shown in condition 2 only of Table II.

4.7.4 Functional test. Testing of the rack shall be performed as outlined in the following procedures and in the order listed:

a. The rack shall be mounted on a test stand in a horizontal position with the hooks downward.

b. A 2000 pound simulated store with standard Air Force Bomb Lugs on 30 inch centers and the center of gravity located midway between the lugs shall be suspended from the rack. The ground safety pin shall be fully inserted. Sway braces shall be torqued as required in the test setup of the 30 inch suspension yield load test paragraph of this specification. The ground safety pin shall be removed and reinserted. Any movement of the hook linkage or rotation of the center bellcrank that prevents or restricts the removal or reinsertion of the ground safety pin shall be cause for rejection. One ARD 863-1 and one ARD 446-1 cartridge shall be inserted in the cartridge retainers (P/N 6AD13265) and installed in the breech of the rack. The retainers shall be screwed into the breech with a torque of 250 to 300 inch pounds. Forward and aft orifice pin assemblies with a diameter of .062 inches

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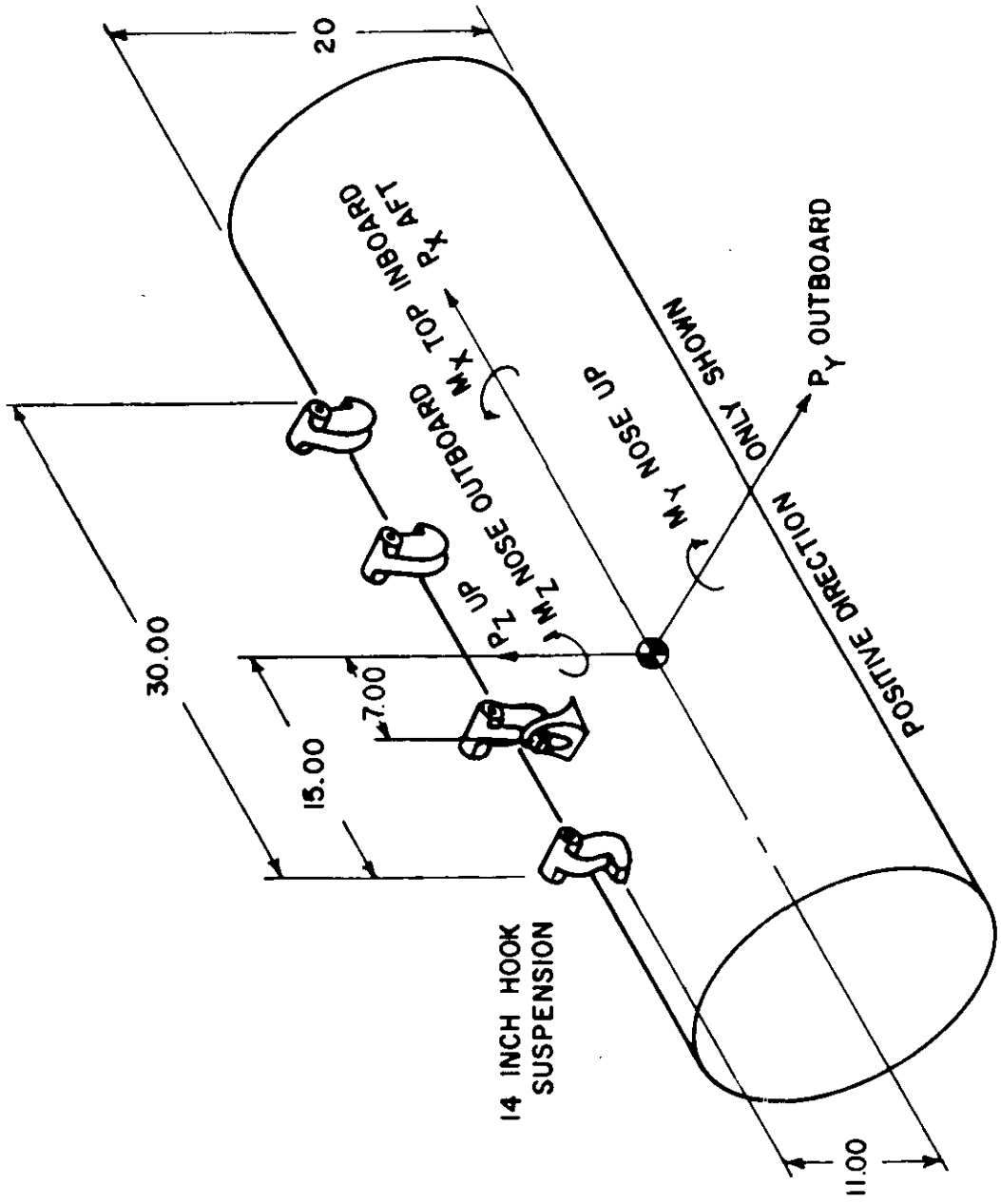


FIGURE 2 LOCATION AND DIRECTION OF LOADS

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shall be installed. With the ground safety pin removed, 28 ± 4 volts DC shall be applied to Pins B-C and the cartridges shall fire. The hooks shall open and the store shall be forcibly ejected. The velocity of the store at the end of the piston shall have returned to their retracted positions. In all cases except individual tests, the peak reaction forces against the supporting structure shall be measured and recorded for each piston. The flight attitude of the store at a position between 2.5 and 3.0 feet below the suspended position shall be horizontal ± 1-1/2 degrees.

* c. The rack hooks shall be latched by clockwise rotation of a suitable tool engaged in the square manual release socket located on the side of the rack containing the cartridge access to the breech and designated by the "Hook Manual Release" presentation. Torque required for this operation shall be 35 - 80 inch pounds and smooth in operation.

* d. The hook manual release shall be rotated in a counterclockwise direction. Torque required for this operation shall be 45 ± 15 inch pounds. The hooks shall open and remain in an opened position.

* e. A standard arming wire for conventional weapons shall be installed in each of the arming controls. Using a convenient device, the force required to pull the arming wires installed in the arming solenoid shall be measured. This measurement shall be made twice for each arming control, once with the arming solenoid not energized and once with the solenoid energized. The required forces shall be:

(1) Arming solenoid not energized:

The arming control shall not release the arming wire when a force of 10 pounds is applied. The arming control shall release the arming wire when a force of 14 pounds is applied.

(2) Arming solenoid energized:

The arming control shall not release the arming wire when a force of 150 pounds is applied.

* f. On the 64J13000-5 rack, the store away switch shall actuate when the end of the plunger is at a point of 1.50 inches minimum below the suspension surface of the 14 inch hooks. The store away switch shall be monitored for proper actuation. Pins G-H, P-R shall indicate "store off" and pins H-J, R-S shall indicate "store present."

NOTE: Throughout this specification, when orifice diameters are specified, the diameter tolerances shall be those shown in the specific orifice drawing.

4.7.5 Sympathetic firing test. The rack shall be mounted with a 2000 pound simulated store loaded on the rack. Two ARD 446-1 (or equivalent cartridges) shall be installed. Special overboard orifice assemblies shall be installed with a 0.025 minimum to 0.040 maximum inch diameter. The rack shall be fired by applying electrical power to one cartridge only. Both cartridges shall have fired.

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4.7.6 Reliability life test. Perform step b. of the Functional test. After completion of step b., of the Functional test, 100 releases of the 2000 pound simulated store shall be performed at ambient temperature with the fore and aft orifice pin assemblies having .062 inch diameters and 100 releases of the 500 pound simulated store with the fore and aft orifice pin assemblies having .047 diameters. Two ARD 446-1 cartridges or CCU-1/B cartridge shall be used in each of the above firings. Using one ARD 446-1 or CCU-1/B and one ARD 863-1 cartridge, or equal, 50 releases of a 100 pound simulated store shall be performed with the fore and aft orifice pin assemblies having .062 inch diameters. The two ejector pistons and the slave piston shall be removed from the rack, disassembled and cleaned after each 25 firings or at the end of each firing day, whichever occurs first. The two ejector pistons shall retract completely for the first five firings following each cleaning of the rack. After each fiftieth firing, orifice pin assemblies, and all "O" rings in the slave and ejector piston assemblies shall be replaced. Completion of this test without such damage or erosion which precludes satisfaction of the functional test shall be considered as meeting the operational life requirements of this specification. Evidence of such damage, wear, or erosion shall be cause for rejection.

*4.7.7 Environmental tests. During or after, as applicable, each environmental test, the rack shall be subjected to steps c., d., and e. of the functional test unless otherwise specified herein. Failure to meet the requirements of these positions of the functional test shall be considered as failure to pass the environmental tests and cause for rejection.

4.7.7.1 High temperature. The rack shall be raised to and held at 93.3°C (200°F) $^{+1}_{-0}$ per cent for four hours. The temperature shall be reduced to ambient and the rack shall be fired five times as specified in the firing portion of the functional test and an inspection shall be made for gas leakage during the firings. In addition to the criteria in paragraph "4.7.7 Environmental tests," evidence of gas leakage shall be cause for rejection.

4.7.7.2 Humidity. The rack shall be subjected to the humidity test described in procedure I, Method 507, MIL-STD-810.

4.7.7.3 Salt fog. The rack shall be subjected to a salt fog test in accordance with MIL-T-7743. Paragraph 4.12 of MIL-T-7743 shall apply.

*4.7.7.4 Icing conditions. With the hooks in the latched condition, the rack shall be stabilized at -53.9°C (-65°F) $^{+0}_{-3}$ per cent, then subjected to 37.7°C (100°F) $^{+3}_{-0}$ per cent and 90 + 2 per cent relative humidity until frost has disappeared. The rack shall then be stabilized at -53.9°C (-65°F) $^{+0}_{-3}$ per cent. While the rack is at this temperature, step d. of the functional test shall be performed except that the force required for manual release shall not exceed 450 inch pounds.

4.7.7.5 Sand and dust. The rack shall be subjected to a sand and dust test in accordance with procedure I, Method 510, MIL-STD-810.

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*4.7.7.6 Vibration. The rack shall be subjected to a Resonance Search Test, and a Resonance Dwell Test in accordance with MIL-STD-810, Method 514, except as specified herein. All electrical circuits shall be monitored during these tests. In addition to the criteria of 4.6.7, malfunction of any part or circuit, failure of any part or inadvertent actuation of the store release mechanism during the vibration testing shall be cause for rejection.

*4.7.7.6.1 Resonance search test. A frequency sweep shall be conducted in each test axis to determine the resonant frequencies of the rack/store combination. The location of the point(s) on the surface of the store which experiences the greatest vibration amplitude will be determined for each resonant frequency. The vibration of the store will be monitored and controlled at this point(s) by a vibration pickup(s) oriented to measure maximum store motion during resonance dwell test. The vibration amplitude during the frequency sweep should be the minimum required to provide the necessary data.

*4.7.7.6.2 Resonance dwell test. The rack shall be subjected to a resonance dwell test in accordance with MIL-STD-810, Method 514, Procedure I, Part I except as specified herein. Resonance dwell tests will be conducted in each axis at each of the selected resonant frequencies. Figure 3 of this specification shall be utilized in lieu of the test curves of Figure 514.1 of MIL-STD-810. Testing in each axis shall be limited to the three resonant frequencies which exhibit the greatest vibration amplitude. The excitation frequency will be established at the appropriate resonant frequency. The vibration amplitude will then be increased until the maximum amplitude measured at the monitor location(s) equals the test curve value (Figure 3) for that frequency. The resonance dwell will then be accomplished at this amplitude and frequency. In the event that resonant frequency shifts as amplitude increases, the input frequency will be established at the resonant frequency at test amplitude.

*4.7.7.6.2.1 Test conditions. Dwell time at each resonance will be thirty minutes. Fifteen minutes of dwell time will be made with the rack safety lock locked and the remaining fifteen minutes with the safety lock unlocked. The complete three axis tests will be accomplished at both the following conditions:

a. With 250 pound simulated store suspended from the 14 inch spacing shackles. The 250 pound store will have a minimum diameter of 10.75 inches.

b. With a 1000 pound simulated store suspended from the 30 inch spacing shackles.

4.7.7.7 Shock. For this test, the maximum weight simulated store shall be the 2000 pound simulated store. Design loads shall be as illustrated in Table II. The rack shall be subjected to the yield load shock tests described in MIL-T-7743.

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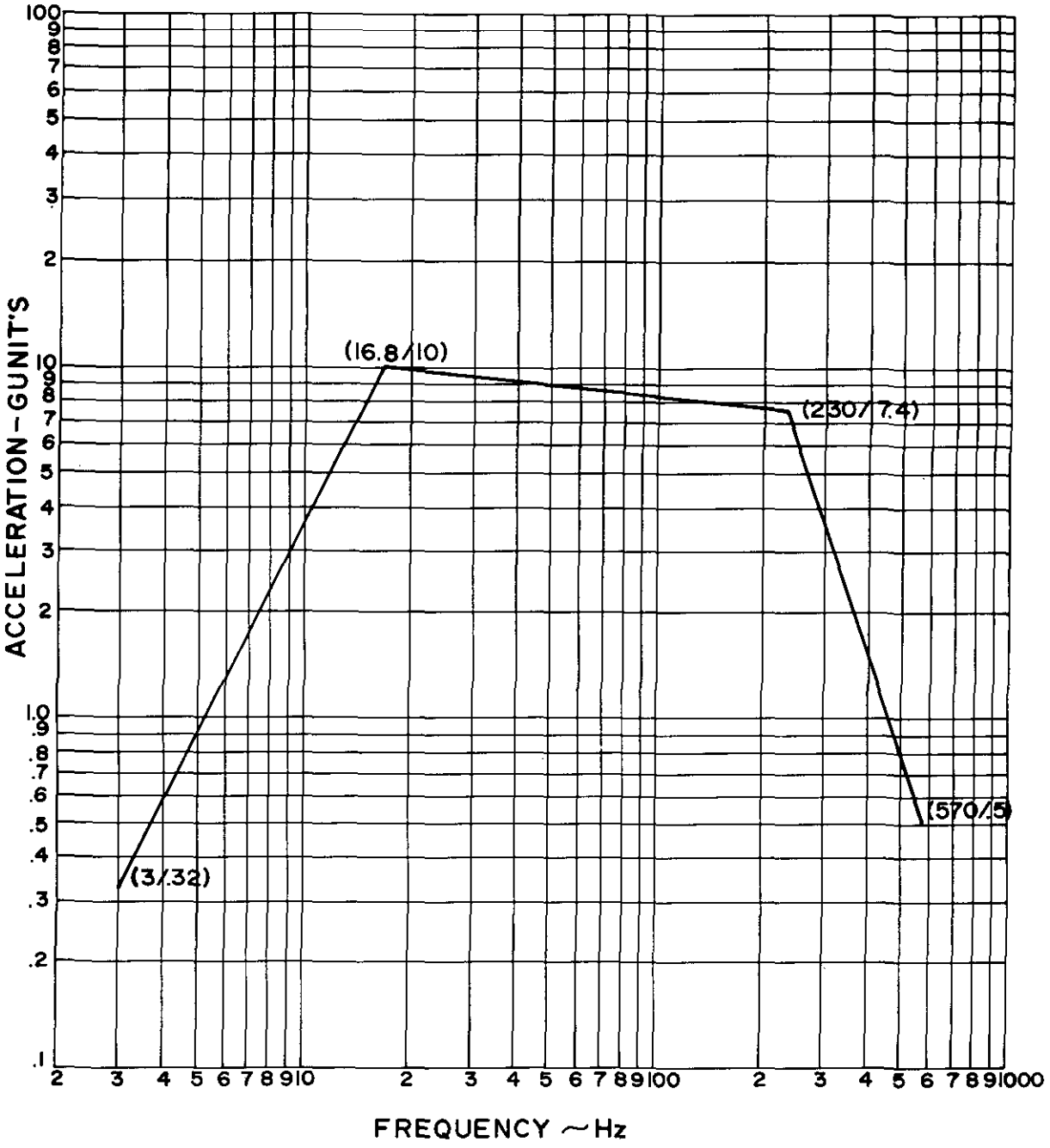


FIGURE-3 RESONANCE DWELL TEST CURVE

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*4.7.8 Electrical tests. After all preceding tests in 4.7 have been completed, a complete electrical continuity and insulation resistance test of all circuits as shown in Drawing No. 64J13155 shall be performed. The insulation resistance test shall be in accordance with MIL-STD-202, Method 302, Test Condition A. Insulation resistance shall be greater than 100 megohms. Failure to pass these tests shall be cause for rejection. Arming solenoids shall not be subjected to the insulation resistance test.

*4.7.8.1 Firing circuit continuity test.

a. Insert ground safety pin into ejector rack to fully engaged position.

b. Apply 28 volts dc to pins B and C (pin N grounded) of rack connector. There must be no voltage present at breech firing pins.

c. Retract ground safety pin to first detent and with 28 volts dc still applied to pins B and C, there must be 28 volts dc present at each breech firing pin.

d. Remove ground safety pin from rack.

NOTE: After completion of the function firing, the rack shall be cleaned (see Section 6).

5. PREPARATION FOR DELIVERY

*5.1 Levels A and B. Each rack shall be cleaned and dried in accordance with applicable processes and procedures of MIL-P-116, and individually preserved and packaged one each in accordance with Method IIB of MIL-P-116. All rack projections, sharp edges, and components shall be padded or wrapped with PPP-C-843 cushioning material. Inner container shall conform to the following specification: PPP-B-636, Type CF, Variety DW, Class Dom, style RSC. Outer container shall conform to PPP-B-636, D.W., style RSC, class W/R, grade V13C.

*5.1.1 Level C. Same as levels A and B, except barrier bag, desiccant and outer container shall be omitted.

5.2 Packing.

*5.2.1 Levels A and B. Racks preserved and packaged in accordance with 5.1 shall be overpacked in a PPP-B-601, style A, overseas type shipping container in quantities which will not exceed weight limitation of specified container. Cushioning, anchoring, blocking, bracing and waterproofing shall be in accordance with MIL-STD-1186.

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*5.2.2 Level C. Racks packaged in accordance with 5.1 and 5.1.1 which require overpacking for acceptance by the carrier shall be packed in an exterior type shipping container in a manner which will insure safe transportation at the lowest rate to the point of delivery. Containers shall meet consolidated freight classification rules or regulations of other common carriers as applicable to the mode of transportation.

*5.3 Marking for shipment and storage. Basic container markings (identification, contract data, address, shipping piece number, international logistic label, special markings, etc.), shall be IAW MIL-STD-129. The nomenclature shall be: RACK, BOMB EJECTOR, AIRCRAFT MAU-40/A.

6. NOTES

6.1 Intended use. The MAU-40/A Bomb Rack is a universal rack designed to be attached to a variety of aircraft and will be used to carry and release conventional stores and fuel tanks.

6.2 Ordering data. Procurement documents should specify the following:

a. Title, number and date of this specification.

b. Conditions under which Government loaned and Government furnished property will be made available to the contractor.

c. Required level of preservation, packaging and packing.

d. Number of spare "O" rings to be furnished with each rack.

6.3 Sampling test samples. Sampling test samples will be submitted as specified in the contract or purchase order.

6.3.1 Sample plan for vendors. In the event multiple vendors of a component are utilized, or a change in vendors occurs, the contractor is obligated to provide one additional representative bomb rack unit for sampling tests containing said multiple vendor part or parts changed from approved qualification sample supplier without an increase in price.

6.4 Gages, jigs, fixtures, dies and molds. All special gages, jigs, fixtures, dies or molds peculiar and necessary to the manufacture of the rack shall be provided as required by the contractor and shall become the property of the Government.

6.5 Salvaged pieces. Any piece(s) from a rejected rack (exclusive of a piece(s) that has been subjected to loads in excess of the yield load point of the rack) may be salvaged for use providing each salvaged piece is inspected, and is found to be in complete compliance with the requirements of this specification and the pertinent drawings and specifications.

*6.6 The rack shall be cleaned as required by the applicable Technical Order 11B29-3-39-2 for daily cleaning before shipment. (Technical Order may be obtained from the procuring activity.)

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6.7 Definition.

6.7.1 Acceptance tests. Acceptance tests are those tests accomplished on equipment submitted under a contract to determine that the units are equivalent in performance and construction to the approved qualification samples.

*6.8 Qualification. With respect to products requiring qualification, awards will be made only for such products as have, prior to time set for opening of bids, been tested and approved for inclusion in the applicable Qualified Products List whether or not such products have actually been so listed by that date. The attention of the suppliers is called to this requirement, and manufacturers are urged to arrange to have the products 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 test report and test units shall be forwarded to the Government for review. The activity responsible for the Qualified Products List is WRAMA/MMEBL, Robins Air Force Base, Georgia. Information pertaining to qualification of products may be obtained from WRAMA/MMEBL, Robins Air Force Base, Georgia 31098; Phone - Area Code: 912, 926-6354.

6.9 The margins of this specification are marked with an asterisk to indicate where changes (additions, modifications, corrections, deletions) from the previous issue 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 issue.

Custodian:
Air Force - 84

Preparing Activity:
Air Force - 84

Project No. 1095-F066

*U.S. GOVERNMENT PRINTING OFFICE: 1977-703-020/5716

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