



DEPARTMENT OF THE NAVY
HEADQUARTERS UNITED STATES MARINE CORPS
3000 MARINE CORPS PENTAGON
WASHINGTON DC 20350-3000

MCO 11262.2B W/ADMIN CH
I&L (LPE)
31 Mar 2016

MARINE CORPS ORDER 11262.2B W/ADMIN CH

From: Commandant of the Marine Corps
To: Distribution List

Subj: STANDARD POLICY FOR INSPECTION, TESTING, AND CERTIFICATION OF TACTICAL
GROUND LOAD LIFTING EQUIPMENT

Ref: (a) 5 U.S.C. 552a
(b) SECNAVINST 5211.5E
(c) SECNAV M-5210.1

Encl: (1) New page inserts to MCO 11262.2

1. Situation. To transmit new page inserts into MCO 11262.2.
2. Mission. To notify all on the distribution list of administrative changes within this Order.
3. Execution. In accordance with references (a) through (c), administrative changes are as follows:
 - a. Page 1-2, paragraph 2j, sentence four needs to be rewritten to state the following; "The Certifying Official will designate in writing, authorized test directors and inspection/test personnel." This change better outlines the requirement of the Certifying Official to properly assign personnel within the program.
 - b. Page 1-4, paragraph 4, sentence three, the following needs to be removed ".and NAVMC 10395, Ordnance Vehicle Preventive Maintenance Record." The form is no longer valid.
 - c. Figure 1-1, related to the Inspection, Testing, and Certification, does not state the correct requirement for wreckers and retrievers to utilize the crane daily inspection checklist. The current paragraph references do not correlate with the correct chapters. Remove current figure on page 1-5 and replace with Enclosure (1) to correct the discrepancies.
 - d. Page 3-2, paragraph 1b(2)(a) needs to be rewritten to state the following; "When corrective action is required, send the equipment to the authorized maintenance section. After the maintenance section has transferred all corrective action to an Equipment Repair Order (ERO), Service Request Order (SRO) or Service Request (SR), the Crane Daily Inspection checklist will be retained with the trip ticket until it is destroyed. When associated with ordnance vehicles, the Crane Daily Inspection checklist will be retained until corrective actions are completed and recorded in Major Automated Information System (MAIS)." This change better outlines the requirement for the ordnance community concerning the Crane Daily Inspection checklist.

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e. Page 3-2, paragraph 1b(2)(b) needs to be rewritten to state the following; "When no corrective action is required, the Crane Daily Inspection Checklist will be retained with the trip ticket and disposed of when the trip ticket is destroyed. When associated with ordnance vehicles, the Crane Daily Inspection checklist will be retained within the ordnance vehicle logbook and disposed of at the start of the next inspection." This change better outlines the requirement for the ordnance community concerning the Crane Daily Inspection checklist.

f. Page 4-3, paragraph 2b(1), sentence five, the following needs to be removed "...and NAVMC 10395." The form is no longer valid.

4. Administration and Logistics

a. Distribution Statement A directives issued by the CMC are published electronically and can be accessed online via the Marine Corps Publications Electronic Library (MCPEL) at <http://www.marines.mil/News/Publications/ELECTRONICLIBRARY.aspx> and MCPEL CD-ROM.

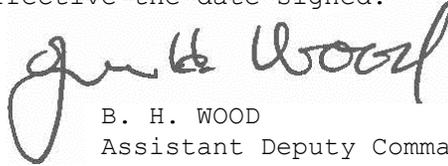
b. The generation, collection or distribution of personally identifiable information (PII) and management of privacy sensitive information shall be in accordance with the Privacy Act of 1974, as amended, per reference (b). Any unauthorized review, use, disclosure or distribution is prohibited.

c. Records created as a result of this Order shall be managed according to National Archives and Records Administration approved dispositions per reference (c) to ensure proper maintenance, use, accessibility and preservation, regardless of format or medium.

5. Command and Signal

a. Command. This Order is applicable to the Marine Corps Total Force.

b. Signal. This Order is effective the date signed.



B. H. WOOD
Assistant Deputy Commandant for
Installations and Logistics

DISTRIBUTION: PCN 1021180000

	JACKSTANDS	HYDRAULIC JACKS	HOISTS	FORKLIFT	CONTAINER HANDLER	CRANES	AERIAL PERSONNEL DEVICE	WRECKERS	RETRIEVERS	CHAPTER/PARAGRAPH REFERENCE
PERMANENTLY MARKED WITH RATED CAPACITY	*	*	*							1
CRANE DAILY INSPECTION CHECKLIST						*		*	*	3.1
ANNUAL CONDITION INSPECTION				*	*	*	*	*	*	3.2
ACI CERTIFICATION				*	*	*	*	*	*	3.8 (4)
HOOK INSPECTION						*		*	*	3.4
NONDESTRUCTIVE TEST						*		*	*	4.2(B)
NO LOAD TEST						*	*	*	*	4.2(A)
LOAD TEST (STRUCTURAL AND STABILITY)						*	*	*	*	4.2(C)
LOAD TEST CERTIFICATION						*	*	*	*	4.4

Figure 1-1. Inspection, Testing, and Certification Requirements



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MCO 11262.2B
LPC
4 Dec 2014

MARINE CORPS ORDER 11262.2B

From: Commandant of the Marine Corps
To: Distribution List

Subj: STANDARD POLICY FOR INSPECTION, TESTING, AND
CERTIFICATION OF TACTICAL GROUND LOAD LIFTING EQUIPMENT

Ref: (a) 29 CFR 1910.180
(b) ANSI/ASME B30.5 dated March 7, 2008 (NOTAL)
(c) 29 CFR 1926. Subpart CC
(d) SECNAV M-5210.1
(e) DoD Instruction 6055.01, "DoD Safety and Occupational Health (SOH) Program," October 14, 2014
(f) ANSI B56.1
(g) MCO P4790.2C Ch 2
(h) Global Combat Support System- Marine Corps (GCSS-MC) Procedural Notices
(i) 10 U.S.C § 101(a)(13)
(j) SECNAVINST 5211.5E

Encl: (1) Procedures for Inspection, Testing, and Certification of Tactical Ground Load Lifting Equipment

1. Situation

a. This Order is applicable to all active duty and reserve units that possess or use tactical ground load lifting equipment. Tactical ground load lifting equipment includes all mobile equipment commonly referred to as cranes, wreckers, retrievers, forklifts, and aerial personnel devices. Aerial personnel devices are defined as any mechanically, hydraulically, or electrically operated devices that are used to lift a person into the air.

b. In general terms, hydraulic jacks and jack stands will be permanently marked with the item's rated load capacity. This Order is not applicable to these assets, detailed instructions are provided in each item's respective technical manual (TM).

c. This Order is not applicable to Garrison Mobile load

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lifting Equipment (cranes, derricks, hoists, winches, monorails, etc.) or load lifting equipment in garrison facilities, since these categories of equipment are non-tactical.

2. Cancellation. MCO P11262.2A.

3. Mission. To publish updated policy and procedures for the inspection, testing, and certification of Marine Corps tactical ground load lifting equipment in order to preserve operational readiness, reduce personal injury, extend life expectancy of tactical ground load lifting equipment, and satisfy the requirements of references (a), (b), and (c).

4. Execution

a. Commander's Intent and Concept of Operations

(1) Commander's Intent. The composition and diversity of the Marine Corps tactical ground load lifting equipment has changed dramatically since 1991, when the previous revision of this Order was published. As a result, a new order is necessary to provide updated information to tactical ground load lifting equipment operators and maintainers.

(2) Concept of Operations. The inspection, testing and certification of tactical ground load lifting equipment will be performed in accordance with this Order, references (a), (b), (c) and respective equipment TMs.

b. Subordinate Element Missions

(1) Deputy Commandant, Installations and Logistics (DC I&L) will serve as the sponsor for this Order and will be responsible for its accuracy and update.

(2) Commanding General, Marine Corps Systems Command/ Program Executive Office-Land Systems shall ensure that all tactical ground load lifting equipment inspections, testing, and certifications procedures and requirements per reference (a) are clearly stated in the respective equipment's TM/Interactive Electronic Technical Manual (IETM) per this Order.

(3) Commanding generals shall designate specific field maintenance organizations to provide inspection, testing and certification services for units without the organic resources/maintenance authority to conduct those inspections, tests and certifications.

(4) Marine Corps installation commanders (bases and stations) shall establish, maintain and make available to a facility that meets the requirements described in chapter 2, enclosure (1) of this Order so that tenant operating force units can perform inspection, testing and certification of organic tactical ground load lifting equipment.

(5) Commanding officers (CO) and officers-in-charge (OIC) shall ensure that tactical ground load lifting equipment inspections, testing, and certifications are conducted per this Order and respective equipment TMs. Additionally, COs/OICs shall ensure that equipment records are properly annotated before the certified equipment is returned to service.

5. Administration and Logistics

a. Recommendations concerning the contents of this Order are invited and will be submitted to Commandant of the Marine Corps (CMC), DC I&L Logistics Policy and Capabilities Branch (LPC-1).

b. Records created as a result of this Order shall be managed according to National Archives and Records Administration approved dispositions per reference (d) to ensure proper maintenance, use, accessibility and preservation, regardless of format or medium.

c. The generation, collection, or distribution of Personally Identifiable Information (PII), and management of privacy sensitive information shall be in accordance with the Privacy Act of 1974, as amended, per reference (j). Any unauthorized review, use, disclosure, or distribution is prohibited.

d. Navy/Marine Corps (NAVMC) forms mentioned in this Order with instructions are available at <https://navalforms.documentservices.dla.mil>.

6. Command and Signal

a. Command. This Order is applicable to the Marine Corps Total Force.

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b. Signal. This Order is effective the date signed.



W. M. FAULKNER
Deputy Commandant for
Installations and Logistics

DISTRIBUTION: PCN 1021180000

LOCATOR SHEET

Subj: STANDARD POLICY FOR INSPECTION, TESTING, AND
CERTIFICATION OF TACTICAL GROUND LOAD LIFTING EQUIPMENT

Location: _____
(Indicate the location(s) of the copy(ies) of this
Order.)

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Chapter 1

Introduction

1. Background. Reference (e) requires that the Armed Forces shall apply Department of Labor's Occupational Safety and Health Administration and other non-DoD regulatory safety and health standard to military unique equipment, systems, operations, or workplaces, in whole or in part, insofar as practicable. This chapter incorporates pertinent safety instructions extracted from reference (a), (b), (c), and (f) and applies them to the Marine Corps' tactical ground load lifting equipment.

2. General Information

a. Figure 1-1 lists requirements for inspection, testing, and certification of tactical ground load lifting equipment. Table 1-1 applies to vertical lifting equipment only. All inspections, tests and certifications are required regardless of operational location/posture.

b. Prior to dispatch, operators of cranes will perform a crane daily inspection of their assigned equipment. NAVMC 11262/2, Crane Daily Inspection Checklist, will be used to complete the daily inspection. The checklist shall be completed (as appropriate) and filed with the respective equipment trip ticket.

c. Tactical ground load lifting equipment will be certified as condition inspected on an annual basis. The Annual Condition Inspection (ACI) ensures that the overall structural, mechanical, hydraulic, and electrical components of the equipment are functioning properly and have been maintained in a safe and serviceable condition.

d. A nondestructive test is required after five certification periods (every five years). Example: One nondestructive test and four ACIs equal five certification periods.

e. Cranes, retrievers and the aerial personnel device (maintenance platform) are the only tactical ground load lifting equipment that require load testing.

f. Load testing is only required if any load sustaining

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components have been altered, replaced or repaired; (i.e., repairs to the truck portion of a mobile crane do not necessitate the performance of load testing of the crane portion). Outriggers are considered to be a part of the lifting portion of a crane/aerial personnel device.

g. Load tests will be the responsibility of the organization performing the repairs and will be completed prior to returning the equipment back to its owner. Upon receipt, the owning unit/receiving official will determine if a load test has been accomplished by examination of the equipment records. If documentation of certification is not present, the owning unit/receiving official may elect to refuse to accept the equipment or accept it and arrange to have it locally load tested.

h. All acquisition contracts pertaining to the purchase and fielding of mobile cranes/aerial personnel devices must include the requirement for the manufacturer to perform load test certification prior to the equipment's delivery.

i. Maintenance/service contracts that permit a commercial contractor to perform significant equipment repair or rebuild of cranes/aerial personnel devices shall contain a load test requirement/certification clause. Maintenance depots (Depot Level of Maintenance) that perform significant repair or rebuild of cranes/aerial personnel devices are also required to perform load test/certification.

j. Certification. The Certifying Official is responsible for ensuring the safety and reliability of all tactical ground load lifting equipment. The Certifying Official will be a Marine officer/chief or qualified civilian and shall be designated in writing by the Commanding Officer. Marine Certifying Officials shall be selected from the following Military Occupational Specialties (MOS): 1310 (Engineer Equipment Officer), 1349 (Engineer Equipment Chief), 3510 (Motor Transport Maintenance Officer), 3529 (Motor Transport Maintenance Chief), 2110 (Ordnance Vehicle Maintenance Officer), or 2149 (Ordnance Vehicle Maintenance Chief). The Certifying Official will formally designate authorized test directors and inspection/test personnel. Certifications shall be based on the annual condition inspection and load test certification.

k. Certifying Officials shall be qualified at an appropriate Marine Corps MOS school on testing responsibilities and requirements. A Department of Labor approved civilian school may be used if the period of instruction (POI) is a

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TECOM approved POI meeting the requirements of this Order. Once initial training is received, there are no further requirements for formal recertification training.

3. Waivers. Waiver of the requirements of this Order is permitted under the following three conditions:

a. Administrative Storage Program. Items of equipment that are placed in administrative storage as delineated in paragraph 3002.11 (Deferred Preventive Maintenance Checks and Service) of MCO P4790.2C (reference (g)), can qualify for waiver. Under no circumstances however, will a waiver for administrative storage be permitted to extend beyond a 30 month period of time. Waivers are not permitted for items placed on administrative deadline or low usage items since reference (e) provides guidance regarding these equipment operating conditions. To ensure better understanding of the waiver process, it is recommended that major command maintenance management SOPs include discussion of local procedures pertaining to waiver of inspection, testing and certification of tactical ground load lifting equipment.

b. Prepositioned War Reserve (PWR) Program. Items of equipment that are placed in PWR Program qualify for waiver under the following conditions:

(1) The asset has met the requirements of this Order prior to induction into PWR.

(2) The asset will meet the requirements of this Order prior to being issued to a using unit.

c. Marine Forces Reserve (MARFORRES). During periods other than a designated contingency operation (see 10 U.S.C § 101(a)(13), reference (i)), declared war, or declared national emergency, the MARFORRES CGs are authorized to grant a one year waiver of the requirements of this Order. When such waivers are authorized, the respective equipment record jacket will reflect this approval by including a copy of each waiver. Under no circumstances will MARFORRES waivers be permitted to extend beyond the one year time frame. MARFORRES CGs are encouraged to establish Interservice Support Agreements or commercial contracts to comply with these requirements in cases where appropriate organic Marine Corps personnel are not available due to geographical location. Inspections, testing, and certifications that are performed by agencies outside the Marine Corps should clearly state that the inspections, testing and certifications have been conducted in accordance with the

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provisions of this Order.

4. Forms and Records. NAVMC 11262/1, Certification of Load Test Record, NAVMC 11262/2, and NAVMC 11262/3, Condition Inspection Report, are the forms that are necessary to perform inspection, testing and certification of tactical ground load lifting equipment as well as the procedures for their use. When an enterprise reporting system is established, the reporting system will be used in place of all forms listed, yet the requirements will remain the same. All required NAVMC 696D, Motor Vehicle and Engineer Equipment Record Folder and NAVMC 10395, Ordnance Vehicle Preventive Maintenance Record remarks that do not have a specific data entry point in GCSS-MC or are not authorized by clarification in reference (h) will be entered manually in the item instance notes section or attached as supporting maintenance documents in install base. However in reference (h), units are required to maintain the NAVMC 696D for filing and disposition of maintenance records in the event that they are unable to upload documents due to hardware deficiencies or the form functions are not currently supported by GCSS functionality.

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	JACK STANDS	HYDRAULIC JACKS	HOISTS	FORKLIFT	CONTAINER HANDLER	CRANES	AERIAL PERSONNEL DEVICE	WRECKERS	RETRIEVERS	PAR. REF.
PERMANENTLY MARKED WITH RATED CAPACITY	*	*	*							1B
CRANE DAILY INSPECTION CHECK LIST						*				1002B
ANNUAL CONDITION INSPECTION (ACI)				*	*	*	*	*	*	1002C, 3000, 3001
ACI CERTIFICATION				*	*	*	*	*	*	1002C, 3000, 3001
HOOK INSPECTION						*		*	*	3003
NONDESTRUCTIVE TEST						*		*	*	4000, 4001.2
NO LOAD TEST						*	*		*	4000, 4001.1
LOAD TEST (STRUCTURAL AND STABILITY)						*	*	*	*	4001.3, A & B
LOAD TEST CERTIFICATION						*	*	*	*	4001.2, 4001.3 (10)

Figure 1-1.--Inspection, Testing, and Certification Requirements

Note to Figure 1-1: Equipment such as wreckers, recovery assets, toolsets equipped with a material handling crane will follow the instructions pertaining to cranes in accordance with applicable TMs or this Order. Inspection, testing, and certification apply to vertical lifting winches only.

Chapter 2

Facilities

1. Load Testing Facility Requirements. The load test facility shall provide a capability that is sufficient enough to conduct testing procedures for all load lifting equipment requiring load testing aboard their installation. The following facility conditions are required for load testing tactical ground load lifting equipment:

- a. A sufficiently large, level hardstand.
- b. A calibrated load cell, or its equivalent, with two shackles.
- c. Calibrated weights, heavy and dense (compact) enough to be used in the load tests described.

2. Location of Testing Facilities. The Commanders of the following installations will provide the aforementioned facilities for the load testing of tactical ground load lifting equipment for all Marine Corps units within their geographical vicinity:

- a. MCB Quantico, Virginia.
- b. MCB Camp Lejeune, North Carolina.
- c. MCAS Beaufort, South Carolina.
- d. MCB Camp Pendleton, California.
- e. MCAS Cherry Point, North Carolina.
- f. MCAS Miramar, California.
- g. MCLB Albany, Georgia.
- h. MCLB Barstow, California.
- i. MCAS Kaneohe Bay, Hawaii.
- j. MCB Camp Butler, Japan.

k. MCAS Iwakuni, Japan.

l. MCD, EEIC, Fort Leonard Wood, Missouri

Chapter 3

Inspections

1. Crane Daily Inspection Checklist. The purpose of the Crane Daily Inspection Checklist is to ensure the safety and reliability of the assigned equipment; it also provides a record of the results captured during the pre-operational checks and inspections. Operators of cranes will perform a daily inspection of their assigned equipment. The commodity manager will take corrective action on all amplifying comments listed on the Crane Daily Inspection Checklist. NAVMC 11262/2 will be utilized to document the Crane Daily Inspection.

a. Checklist Preparation Instructions

(1) Section 1 General Information

(a) In the USMC SERIAL NUMBER block, enter the crane's serial number.

(b) In the TYPE/CAP block, enter the type of crane and its capacity.

(c) In the UNIT block, enter the unit that is accountable for the equipment.

(2) Section 2 Inspection. In each block, mark the correct description that reflects the crane inspection results as indicated in the legend of marking (S = satisfactory, N/A = not applicable, or U = unsatisfactory). The inspection will be complete prior to the crane being employed.

(3) Section 3 Special Instructions. Operator will immediately suspend all crane operations and notify the supervisor when observing any unsatisfactory condition of any item indicated with an asterisk (*) listed in inspection section.

(4) Section 4 Remarks. In the REMARKS block, enters comments related to the crane inspection as well as any issues or discrepancies not covered within the inspection section.

(5) Section 5 Signature. The crane operator will sign the OPERATOR block and input the DATE the crane inspection was conducted. The signature and date verifies that the Crane Daily Inspection was properly conducted.

b. Filing and Disposition Instructions

(1) The operator returns the Crane Daily Inspection Checklist to the supervisor upon completion of the commitment.

(2) The supervisor will review the Crane Daily Inspection Checklist and take corrective action on any unsatisfactory comments listed in the Remarks section.

(a) When corrective action is required, send the equipment to the authorized maintenance section. After the maintenance section has transferred all corrective action to an Equipment Repair Order (ERO), Service Request Order (SRO) or Service Request (SR), the Crane Daily Inspection Checklist will be retained with the trip ticket/ordnance vehicle logbook and disposed of when the trip ticket/ordnance vehicle logbook is destroyed.

(b) When no corrective action is required, the Crane Daily Inspection Checklist will be retained with the trip ticket/ordnance vehicle logbook and disposed of when the trip ticket/ordnance vehicle logbook is destroyed.

2. Annual Condition Inspection. In addition to those inspections required by load lifting equipment TMs or commercial manuals, the inspections in paragraph 3 of chapter 3 of this order (as applicable) will be performed. Whenever possible, the equipment TMs/IETMs will cover all areas stated below. When conducting an ACI, at a minimum, the following test equipment is required: electronic or mechanical protractor, dial calipers, 100 foot tape measure, 2 carpenter's levels (2 foot and 4 foot), and a sheave gauge. Navy and Marine Corps Form 11262/3 will be utilized to document the Annual Condition Inspection.

3. All Load Lifting Equipment

a. Inspect all mechanical controls for proper adjustments and inspect the entire control mechanism for excessive wear of components and contamination by leaking lubricants or foreign matter.

b. Inspect hydraulic system seals, hoses, lines, fittings, pumps, and valves, for deterioration, leaks, and wear.

c. Inspect the mast and lift carriage assemblies including forks and chains, for cracks, broken welds, distortion, improper fit, and excessive wear.

d. Inspect the brake and steering systems for excessively worn or defective moving parts to include seat switches, parking brakes, and brake interlock switches.

e. Inspect the electrical, gasoline, and diesel systems for signs of malfunction, excessive deterioration, dirt or moisture accumulation, and compliance with applicable safety regulations.

f. Inspect the protective motor control circuit devices, battery cable connectors, battery compartment insulation, thermo protectors, compartment covers, filters, and emergency switches.

(1) Ensure that all electrical cables are appropriately mounted and protected to prevent damage by abrasion, cutting, or catching on stationary objects.

(2) Ensure that batteries are securely fastened in place to prevent spillage of electrolyte onto electrical cables.

(3) Ensure that battery compartments provide ample ventilation and have openings properly guarded to prevent contact of foreign objects with cell terminals.

(4) Ensure that equipment is clean and free of excessive oil and grease accumulations, particularly within the confines of the motors and on electrical contacts.

g. All deficiencies observed during inspection shall be corrected and repairs completed prior to load testing (if required).

h. During extended combat operations where load testing is not feasible, ACIs are still required for post maintenance and annually until such a time that load testing can again be accomplished.

4. Hook Inspection

a. General Inspection. Hooks shall be inspected annually for wear in swivels and pins, other wear, cracks or gouges, and proper operation and condition of safety latches, where

installed. Cracks and gouges parallel to the contour of the hook shall be removed by surface abrasion and shall result in a smooth surface retaining the profile of the hook. In cases where cracks and gouges cannot be removed by surface abrasion, the hook shall be discarded. In cases where cracks and gouges are transverse to the contour of the hook, the hook shall be evaluated for retention or disposal. Defects in the unstressed portion of the hook do not affect strength. No attempt shall be made to correct hook deficiencies by use of heat or welding. Where normal wear or removal of cracks or gouges results in a reduction in the original sectional dimension of 10 percent or more, the hook shall be discarded. If the hook is visually bent or twisted, it shall be discarded. No attempt shall be made to straighten bent or twisted hooks. Hooks will not be painted; if they are painted, it must be removed in a way which does not damage the hook. A clear coat rust inhibitor may be applied on the hook.

b. Hook Throat Spread. Hooks shall be measured for hook throat spread upon receipt. A throat dimension base measurement shall be established by measuring the distance between these tram points (+/- 1/64 inch). [See figure 3-1]. This base dimension shall be measured using a dial caliper and will be entered in the "remarks" section of the NAVMC 696D or manually added to the item instance notes section as supporting maintenance documents in install base of GCSS-MC for the life of the hook. The hook throat spread will be measured quarterly to ensure it is within tolerance. When nondestructive testing (4001.2) is conducted, the hook throat dimension measurement will also be entered in GCSS-MC. Hooks showing an increase in the throat opening by more than 5 percent from the base measurement shall be discarded.

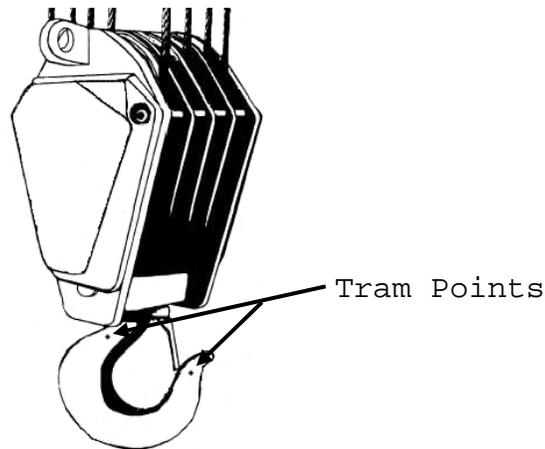


Figure 3-1.--Tram Points

c. Hook Block Inspection. The hook, retaining nut, and bearings shall be thoroughly inspected annually. The hook and retaining nut shall be visually examined for thread wear and corrosion damage. The block bearing plate shall be visually inspected for cracks, wear, or other damage. Bearings shall be inspected for unusual wear and free rotation. All components shall be lubricated as required.

5. Inspection of Wire Rope, Fastenings, and Terminal Hardware

a. General Procedures. Inspect for crushing, kinks, corrosion, or other damage, broken wires, and proper lubrication. Check the wire rope sockets, swage fittings, eye swivels, trunnions, stays, pendants, and securing hardware for wear, cracks, corrosion, and other damage. The drum end fittings need only be disconnected and/or disassembled when visible evidence of deterioration deems it necessary. Depending on the manufacturer and type of wire rope, you may need to remove the wire rope dressing from those areas exposed to maximum wear, exposure, and abuse. Figure 3-2 gives a basic nomenclature of wire rope which can be used as a visual guide during inspection.

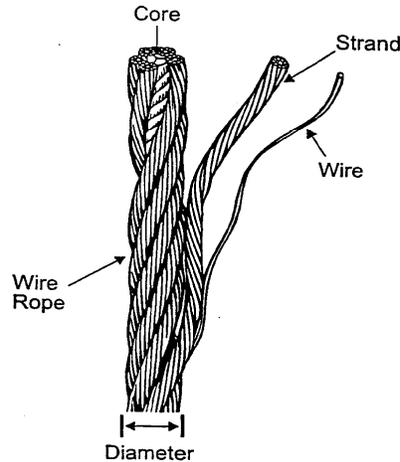


Figure 3-2.--Nomenclature of Wire Rope

b. Wire Rope Rejection Criteria. Remove damaged portions (or replace entire length, if necessary) if any of the following are found:

(1) Kinked, Birdcages, Doglegged, or Crushed Sections. Kinked, birdcages, doglegged, or crushed rope in straight runs where the core is missing or protrudes through or between strands, or where the rope does not fit properly in sheave or drum grooves. (This does not apply to runs around eyes, thimbles, or shackles.)

(2) Wear. Wear exceeding one-third the original diameter of outside individual wires.

(3) Broken Wires

(a) Running Ropes. Six randomly distributed broken wires in one lay or three broken wires in one strand in one lay. For rotation resistant wire rope, two in a length equal to six times the rope diameter or four in a length equal to 30 times the rope diameter. One outer wire broken at the point of contact with the core of the rope that has worked its way out of the rope structure and protrudes or loops out from the rope structure ("valley break"). For end connections, two broken wires within one lay length of the end connection. Figure 3-3 is a visual of one lay of the wire rope. As the strand of rope starts on the top, rotating around the circumference of the rope, and again meeting the top of the rope, this is considered "one lay" of the rope.

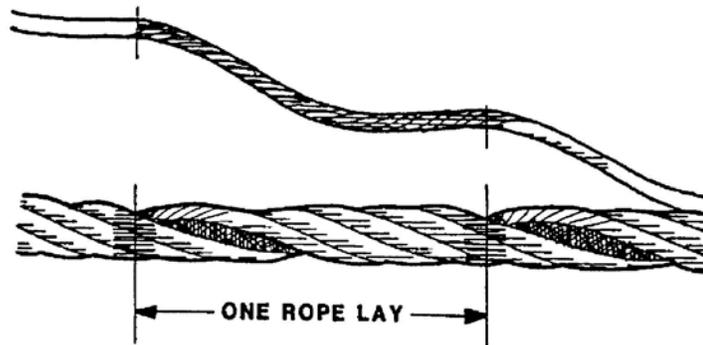


Figure 3-3.--Rope Lay Diagram

(b) Standing, Guy, and Boom Pendant Ropes. Three broken wires in one lay length in sections beyond end connection or two broken wires within one lay length of the end connection.

(4) Loss in Diameter. Reduction from nominal diameter of: (See Fig. 3-3)

- 1/64" for diameters up to and including 5/16"
- 1/32" for diameters 3/8" to and including 1/2"
- 3/64" for diameters 9/16" to and including 3/4"
- 1/16" for diameters 7/8" to and including 1 1/8"
- 3/32" for diameters 1 1/4" to and including 1 1/2"
- 10 percent for diameters over 1 1/2"

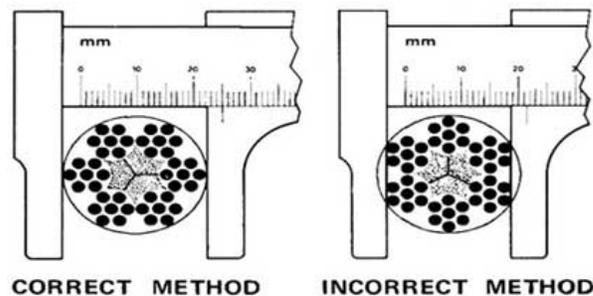


Figure 3-4.--Proper Method to Measure Nominal Wire Rope Diameter

(5) High Strand. High strand where the height exceeds 10 percent of the nominal diameter.

(6) Corrosion. Corrosion such that significant pitting occurs on the surfaces of outside wires. Minor surface roughness on outside wires is acceptable provided no significant pitting occurs and the rope is not corroded internally. Significant pitting is defined as pitting that cannot be removed by abrasive removal of less than 1/3 of the original diameter of individual outside wires.

(7) Heat Damage. Evidence of heat damage from any cause.

(8) Accumulation of Defects. An accumulation of defects that in the judgment of the inspector creates an unsafe condition.

(9) Splices. Wire rope shall not contain splices.

(10) Rated Capacity. The rated capacity of the replacement wire rope for all cranes shall be per the manufacturers' stated requirements.

(11) Replacement of the wire rope does not require the equipment to be load tested.

6. Hoists, Vertical Lifting Winches and Structural Metal Components

a. Operation Check. The operator shall perform an operation check as prescribed in the respective equipment TM. In cases where an operation checklist is not included in the TM, the following inspection shall be conducted:

(1) Inspect all control mechanisms for maladjustment which could interfere with proper operation.

(2) Inspect all control mechanisms for excessive wear of components and contamination by lubricants or other foreign matter.

(3) Inspect all safety and locking devices for malfunction.

b. Condition Inspection. During each annual certification, inspect for the following, as applicable:

(1) General Information

(a) Inspect for evidence of mishandling and/or damage.

(b) Inspect for excessive wear on brake and clutch system linings, pawls, and ratchets.

(c) Inspect for rope reeving for nonconformance with manufacturer's specifications.

(2) Frames. Check for bends, distorted sections, broken welds, excessive corrosion, and loose bolts or rivets.

7. Inspection of Forks. Forks will be inspected annually. Any forks with measurements outside the tolerances listed below will be removed from service. No attempt shall be made to straighten bent or twisted forks.

a. Height of tips. Deviation between forks greater than 3 percent of the fork length.

b. Angle of shank. Bends greater than 3 degrees from 90 degrees.

c. Straightness. Deviation more than 0.5 percent of the fork length.

d. Wear. 10 percent wear of original thickness on any service.

8. Condition Inspection Record (CIR). The CIR (NAVMC 11262/3) provides a record of the results of the Annual Condition Inspection (ACI). The commodity manager of load lifting equipment will ensure that ACIs are conducted per this Order. The commodity manager will take corrective action on all amplifying comments listed on the CIR.

a. Preparation Instructions

(1) Section 1 General Information

(a) In the USMC SERIAL NUMBER block, enter the equipment's serial number.

(b) In the TYPE/CAPACITY block, enter type of equipment and its capacity.

(c) In the Purpose of inspection block, enter the purpose of the inspection.

(2) Section 2 Inspection. In each item block, mark the correct description that reflects the equipment inspection results (S = Satisfactory, N/A = for not applicable, or X for defective). The inspection will be conducted/completed at a minimum of annually (12 months from the last inspection date).

(3) Section 3 Remarks. In the REMARKS block, enter comments related to the equipment inspection as well as any issues or discrepancies not covered within the inspection (i.e. hook throat spread, load test date etc.).

(4) Section 4 Certification

(a) Load Test Inspector. This will be signed and dated by the individual conducting the inspection certifying that the inspection was completed, regardless if the results of the inspection was pass or fail. This certifies that the inspection was conducted in accordance with the applicable orders and technical manuals.

(b) Test Director. This will be signed and dated by the Test Director once the equipment has passed the condition inspection. This certifies that the inspection was conducted and passed in accordance with the applicable orders and technical manuals.

(c) Certifying Official. This will be signed and dated by the Certifying Official once the condition inspection record has been completed and signed by the Test Director. This certifies that the equipment has completed and passed the yearly inspection requirement in accordance with the applicable orders and technical manuals and is safe and reliable for employment.

b. Filing and Disposition Instructions

(1) The commodity manager will review the CIR and take corrective action on any unsatisfactory comments listed in the Remarks section.

(2) When corrective action is required, send the equipment to the authorized maintenance section.

(3) When corrective action is completed, the commodity manager will ensure the equipment is inducted for another ACI.

(4) When the equipment passes the CIR/ACI, it will be entered manually in the item instance notes section and

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inspection forms will be attached as supporting maintenance documents in the installed base or retained by the equipment owner. This recording will be retained until successful completion of the next annual condition inspection.

9. Recording Requirements. NAVMC 11262/3 shall be used for recording (as applicable) the ACI of load lifting equipment. The CIR of load lifting equipment will be entered manually in the item instance notes section or attached as supporting maintenance documents in installed base of GCSS-MC. However, in reference (h), units are required to maintain the NAVMC 696D for filing and disposition of maintenance records in the event that they are unable to upload documents due to hardware deficiencies or the form functions are not currently supported by GCSS functionality. It will be retained until successful completion of the next ACI.

Chapter 4

Load Tests

1. General

a. Overload tests are prescribed tests and extreme caution should be observed at all times during their performance. When testing hydraulic boom cranes, at no time during the structural test, will an outrigger rise off the deck. During the stability test, an outrigger opposite a load positioned at a swing angle of 45 degrees, 135 degrees, 225 degrees, and 315 degrees (measured from the front of the vehicle as 0 degrees) may rise off the ground, and is not tipping. At no time should two outriggers rise off the ground. If this condition occurs, testing should immediately be terminated by lowering the test load to the ground.

b. Prior to load testing, a condition inspection per the instructions contained in paragraph 2 of chapter 3, preceding, will be performed.

c. The test load should be raised only to a height sufficient to perform the test.

d. During all inspection and testing procedures, ensure that all non-essential personnel are positioned outside the working radius of the equipment.

e. During combat conditions, under the supervision of the Certifying Official, items of Marine Corps equipment with a known weight may be used with a dynamometer as load testing weights. Reference the technical manuals for equipment being lifted to ensure proper lifting points are being utilized.

f. The sequence of events for load testing is, conduct the annual condition inspection, nondestructive test, no-load test, structural test and stability test.

2. Cranes

a. No-Load Tests. Level the equipment as required by the manufacturer's load chart. For truck cranes, extend outriggers and raise the crane carrier off the ground to completely unload

tires or wheels. Rotate the boom 90 degrees from the longitudinal axis of the crane carrier and position the boom at the minimum working radius.

(1) Hoist

(a) Raise and lower the hook through the full working distance of hook travel.

(b) Run the hoist block into the limit switch(es) (where installed) at slow speed.

(c) Run the hoist block beyond the limit switch(es) (where installed) by using the bypass switch.

(2) Boom

(a) Raise and lower the boom through the full working range.

(b) Raise the boom into the upper limit switch (where installed). Raise the boom past the boom upper limit switch, using the bypass switch.

(c) Test the lower limit switch (where installed) by the same procedure prescribed for testing the upper limit switch.

(d) Extend and retract the telescoping boom sections to the full distance of travel.

(e) Check the radius indicator by measuring the radius at the minimum and maximum boom angle.

(f) Other motions, including swing, shall be operated through one cycle (one full revolution of major components).

b. Non Destructive Test (NDT)

(1) An NDT will be performed on the hook of tactical load lifting equipment every 5 years. At a minimum, the Dye Penetrant test will be conducted (The Dye Penetrant Test capability currently resides in the Intermediate Maintenance Activity (IMA), performed by MOS 2161 or qualified civilian personnel). If the hook fails a test, it will be discarded and replaced. The results of the NDT will be recorded on the SR and retained in the equipment record jacket until the completion of the next NDT. The date of the NDT will be recorded in the

equipment records remarks section. Additionally, the date of the nondestructive test will be annotated in the "remarks" section of NAVMC 696D and NAVMC 10395. All required NAVMC 696D remarks that do not have a specific data entry point in GCSS-MC or are not authorized by clarification in reference (g) will be entered manually in the item instance notes section or attached as supporting maintenance documents in install base. However, in reference (i), units are required to maintain the NAVMC 696D for filing and disposition of maintenance records in the event that they are unable to upload documents due to hardware deficiencies or that the form functions are not currently supported by GCSS functionality.

(2) COs shall not be limited to the IMA as the only resource to conduct NDTs. Civilian NDT facilities can also be used to satisfy the testing requirement. The NDT methods/tests below can also be used to satisfy the requirement:

- (a) Penetrant Testing.
- (b) Magnetic Particle Testing.
- (c) Electromagnetic/Eddy Current Testing.
- (d) Radiography.
- (e) Ultrasonic Testing.
- (f) Acoustic Emission Testing.

c. Load Test. The load test consists of two parts: a structural load test and a stability test. The delineation between the sections of the load chart, structural and stability, will be identified by the manufacturer. The tests will be performed in accordance with the Technical Manual or the following sequence:

(1) Structural Test

(a) Select a weight capacity from the structural portion of the load chart. During the test, exert 110 percent of the selected weight.

(b) Position the crane at the test site to ensure the test will be conducted 90 degrees to the right or left of the lower carrier frame.

(c) On a suitable surface with outrigger pads or dunnage,

extend outriggers to full horizontal extension and vertical cylinders lowered to level the turntable bearing. Check level with carpenter's level. Place level in direction of boom and at 90 degrees to direction of boom to establish a level turntable. Tires must be off the ground for the test.

(d) Position the boom at the prescribed lift angle (verified with a protractor) and extension; verify the radius with a tape measure.

(e) Attach the hook to the verified weights or deadman using a load lifting measuring device, ensuring the wire rope connecting the hook to the boom is in a vertical configuration (check wire rope with carpenter's level and/or a digital protractor).

(f) Boom up 2 degrees to 4 degrees to compensate for boom deflection.

(g) Slowly raise the load off the ground (if required), just high enough to clear the surface, (2 to 4 inches), to achieve 110 percent capacity of the selected weight from the load chart.

(h) Once the desired capacity (110 percent) is achieved, suspend (hold) the load for ten minutes. Observe for any lowering that may occur, which may indicate a malfunction of boom or hoisting components, brakes, or outriggers. If this happens, the equipment has failed the test.

(i) After ten minutes, slowly decrease load until wire rope is barely slack. Inspect the hook as described in paragraph 4 of chapter 3. This completes the structural test.

(2) Stability Test

(a) Choose any load from the stability portion of the load chart. Chosen test load must be able to clear outriggers during full 360 degrees rotation.

(b) Position the crane at the test site to ensure the test can be conducted through the full range of motion (i.e., 360 degree for mobile cranes).

(c) On a suitable surface with outrigger pads or dunnage, extend outriggers to full horizontal extension and

lower the vertical cylinders to level the turntable bearing. Check level with carpenter's level. Place level in direction of boom and at 90 degrees to direction of boom to establish a level turntable. Tires must be off the ground for test.

(d) Position the hook block in a manner to obtain the appropriate operating radius for boom length. Confirm by actual measurement the operating radius to center of rotation. Adjustment may be necessary to obtain the specified radius.

(e) Mark the operating radius with a line of sufficient length to ensure its visibility when the load is suspended over it. The line should be on an arc about the axis of rotation for the tested radius.

(f) Position the test load inside the selected operating radius. The rated load is equal to the test weight, the hook block weight, and the sling weight.

(g) Boom up 2 degrees to 4 degrees to position the hook block over the load and to compensate for boom deflection. Lift the rated load. Boom down while keeping load close to ground until the rated load and hook block is centered over the selected operating radius and suspends the rated load 2 to 4 inches above the ground.

(h) Swing the crane through the 360-degree rotation.

(i) Lower load, this completes the stability test.

(j) Load tests, when required, will be recorded and certified as shown in the form contained in TM 4700-15/1_, pg 2-26-2, Fig 2-26-1. Load test certification forms will be entered manually in the item instance notes section or attached as supporting maintenance documents in install base. However, units are required to maintain the NAVMC 696D for filing and disposition of maintenance records in the event that they are unable to upload documents due to hardware deficiencies or the form functions are not currently supported by GCSS-MC functionality. This certification will be retained until successful completion of the next test.

3. Aerial Personnel Devices

a. General Information. The only authorized aerial personnel device in the Marine Corps is the Maintenance Platform, Air Mobile Crane (B1300). The sequence of events for load testing is, conduct the ACI, no-load test, load test.

b. Pre-operation. The operator shall perform preoperational checks as prescribed in the respective equipment's TM.

c. Condition Inspection. Condition inspections will be conducted per the instructions contained in paragraph 2 of chapter 3 of this Order.

d. Load Test (Stability and Range of Movement). Procedures are contained in the Air Mobile Crane Operators Manual, TM 5-3810-305-10, pg 1-45.

4. Certification of Load Test Record. Navy and Marine Corps Form 11262/1 provides a record of the results of the Load Test. The commodity manager of load lifting equipment will ensure that the load test is conducted per this Order.

a. Preparation Instructions

(1) Section 1 General Information

(a) In the USMC SERIAL NUMBER block, enter the equipment's serial number.

(b) In the TYPE block, enter type of equipment being load tested.

(c) In the Rated Capacity block, enter the equipment's rated capacity for pounds and feet.

(d) In the Boom Length block, enter the equipment's boom length.

(e) In the Test Site block, enter the test site location.

(2) Section 2 Load Test

(a) In the TEST LOAD PERCENT block, enter the load test percentage used for the structure and stability test (110%)

(b) In the Structure Test pounds and feet block, enter the weight used and the feet of boom used during the test.

(c) In the stability Test pounds and feet block, enter the weight used and feet of boom used during the test.

(d) In the Hook Throat Spread blocks, enter the hook opening measurements from before and after the tests.

(3) Section 3 Certifications. Enter the paragraph number listed in this MCO and the equipment technical manual (if applicable) that applies to the equipment being tested.

(4) Section 4 Condition. Annotate if the Condition Inspection record was provided.

(5) Section 5 Remarks. In the REMARKS block, enter the comments related to the Load Test that is not covered within Sections 2 and 3.

(6) Section 6 Signature

(a) Load Test Inspector. This will be signed and dated by the individual conducting the load test, certifying that the load test was completed, regardless if the results of the load test was pass or fail. This certifies that the load test was conducted in accordance with the applicable orders and technical manuals.

(b) Test Director. This will be signed and dated by the Test Director once the equipment has passed the load test. This certifies that the load test was conducted and passed in accordance with the applicable orders and technical manuals.

(c) Certifying Official. This will be signed and dated by the Certifying Official once the load test has been completed and signed by the Test Director. This certifies that the equipment has completed and passed the load test in accordance with the applicable orders and technical manuals and is safe and reliable for employment.

b. Filing and Disposition Instructions. When the equipment passes the load test, it will be entered manually in the item instance notes section and inspection forms will be attached as supporting maintenance documents in the installed base or retained by the equipment owner. This recording will be retained until successful completion of the next load test.