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A WORD FROM TOPSIDE

Tim Blanton

Inside this issue:

As I led off with in the March 2020 Word from Topside, first and foremost, I am hoping that you and your families remain safe and healthy as we collectively deal with the COVID-19 pandemic. Second, I want to thank you for your diligence and oversight of weight handling operations in FY2020. Despite significant manning shortages and operational impact, the Navy's weight handling program is having one of its better years in recent history with regard to crane accidents, with only 32 significant crane accidents to date for an accident severity rate of 19.4%. A strong contributor to the lowered rate is the continued positive reporting of near misses, which is on pace for an all-time high. Additionally, despite impacts due to the pandemic, our virtual (remote) evaluations have recognized that many monitor programs remain strong. Robust monitor programs, coupled with active near miss reporting, result in significant opportunity to improve via lessons learned so that corrective actions can be applied to negative trends. Although overall performance has improved, it is important to remember that weight handling operations always involve some level of risk as evidenced by four crane and rigging accidents in FY2020 that resulted in OPNAV reportable class "C" events; two involving damage over $50K and two involving injuries. To quote my predecessor, "gravity never sleeps", and this is an outstanding statement to drive home the risk involved in weight handling operations.

I want to take this opportunity to update you on some of the steps we have taken and plan to take, as well as some actions that you can take to mitigate the risk and keep you safe during weight handling operations.

Crane Safety Advisory (CSA) 238B – NCC recently issued CSA 238B, which updated exceptions previously taken in CSAs 238 and 238A with regard to specific NAVFAC P-307 requirements. Exceptions shall only be utilized to prevent disruption of mission support. As before, CSA 238B should be consulted for specific exemptions and requirements, which include (1) some new allowances for maintenance and lubrication in addition to the allowances contained in NAVFAC P-307, paragraph 3.6, (2) crane certifications expiring in the next 60 days may be extended by 60 days, or up to a maximum of 180 days for cranes previously extended under CSAs 238 and 238A, (3) category 3 non-cab operator retraining may be delayed for up to a maximum of 180 days, (4) crane operator licenses that will expire within the next 60 days may be extended by up to maximum of 180 days, (5) NAVFAC P-307, section 14 equipment and rigging gear requiring periodic inspection and test may be extended by 60 days, independent of the existing exception (NAVFAC P-307, paragraph 14.4.4.), and (6) allowances to delay reporting accident, near miss, and unplanned occurrence final reports; reduction of contractor crane operations oversight at the contracting officer's discretion; additional time provided for NAVCRANECEN evaluation requests for information; and delays in activity evaluation response reports.

Weight Handling Program Evaluations – All travel associated with oversight (evaluations) of Navy weight handling programs remains curtailed and we will continue to remotely review your programs using the requested information and documentation that your activities typically provide in advance of the evaluation, focusing on weight handling program management. Based on the potential for COVID-19 spread during travel and the resurgence in COVID-19 infections in many areas, we do not anticipate resuming normal travel for most evaluations at least through August 2020.

Return to Work Concerns – In the March 2020 Word from Topside, I focused on several guidelines, specific for each level of effort (e.g., deck plate personnel, supervision, and management) which were to be used during this period of time to promote safety and risk. Based on NAVCRANECEN data over the past few months, your actions were effective and I encourage you to continue them. Currently, there is a strong push to return to work (the new normal) both in the Navy and in our communities. I want you to remain cautious for not only COVID -19 but also due the inherent risk associated weight handling as we reintroduce personnel to our crane, rigging, and maintenance teams. There will also most likely be production pressure, whether real or perceived, to make up for lost productivity during the pandemic. We cannot afford corners to be cut or for planning to be shortchanged. Managers and supervisors, your presence on the waterfront is critical to set the required standards and expectations for the Navy's weight handling program.

In closing, your safety and health remain my utmost importance. As I stated in previously, whether coming into work for mission essential tasks or going to the supermarket to get needed supplies for your family, please take the time to prepare, protect yourself, and execute the task smartly, to include stopping if needed should the parameters or factors change. Additionally, I recognize that the Navy's weight handling personnel are one of the few groups that interact with all of the various shops and product lines throughout the various commands. In addition to enforcing the standards and expectations associated with the Navy's weight handling program, I also encourage you to enforce your command's standards and expectations with respect to COVID-19 social distancing and face-covering requirements, noting that our field offices have noticed activities that have requirements in place, but are failing to follow through with enforcement.

TIP OF THE SPEAR
THIRD QUARTER FY20 EVALUATION SUMMARY

Our spear was slightly blunted in the third quarter by COVID-19. Due the ongoing restrictions in travel and concern for the health of our personnel, as well as that of activity personnel, all evaluations in the third quarter were performed remotely and were limited to a review of activity-provided program management information, effectiveness of corrective actions taken since the previous evaluation, and discussions with activity supervision and management. Since the reviews did not cover all areas of an activity's weight handling program, a satisfactory grade could not be provided; however, two programs were evaluated as unsatisfactory based on the documentation submitted and the discussions during the reviews.

Thirty-six Navy WHE programs were given program reviews. One NMCB was given a remote equipment review during their deployment. One non-Navy program was reviewed.

Effective monitor programs result in better recognition of unsafe crane and rigging operations, which in turn result in better recognition of lower threshold accidents (avoidable contact with no damage) and near misses, thus helping to prevent serious accidents. In addition, the monitor program better enables development of a value-added activity self-assessment.

Many of the activities reviewed showed improvement in their monitor programs, but still have room for improvement, either in identifying the almost inevitable unsafe practices, near misses, and lower-threshold accidents, or in monitoring non-operational functions, such as maintenance, inspection, and testing. Other activities are further behind or have not started this NAVFAC P-307-required function.

REVIEW ITEMS

Common Review Items (three or more items): As noted above, monitor program weaknesses continued to dominate, as this was an item for virtually all activities reviewed, followed by weak or non-self-critical activity self-assessments. (Note: An effective monitor program facilitates the development of a self-critical "self-assessment").

- Lack of monitor program or established program that needs improvement or does not cover all program elements – 33 items.

- Weakness in (or non-existent) activity self-assessments, self-assessments not acted upon, not internally focused, not developed utilizing documented monitor or metrics data – 17 items.

- Lack of leading metrics/metrics not being properly analyzed – 10 items.

- Lack of (or low number of) lower order crane accident/or rigging accident and near-miss reports –7 items.

- Local WH instruction/SOPs non-existent or inadequate – 7 items.

- Training issues, including contractor personnel (training not taken, training weak or not effective, refresher training not taken or not taken within three months of license renewal, lack of inspector training, instructor not authorized by NCC, locally required training not taken, training course score less than 80 percent, non-Navy eLearning (NEL) certificates) – 7 items.

- Inspection and certification documentation errors – 7 items.

- Lack of, ineffective, or insufficient crane replacement/modernization plan – 6 items.

- Lack of leading metrics/metrics not being properly analyzed – 6 items.

- Internal audit issues (no audit program, not finding issues, not on schedule, overly thorough-hindering effectiveness, lack depth of analysis, responses not required to audit findings) – 5 items.

- No procedure for tagging equipment with known deficiencies and/or tagging equipment that is out of certification – 5 items.

- Staffing issues (shortages in critical areas, no succession planning, APT staffing, high turnover of military personnel, inadequate engineering support, total reliance on remote contractor, one person performing too many functions) – 3 items.

- Questionable proficiency for cat 1 or cat 3 crane operators due to minimal operations – 3 items.

- Poor oversight of contractor responsibilities (maintenance, test, operations) – 3 items.

SUMMARY OF WEIGHT HANDLING EQUIPMENT ACCIDENTS SECOND QUARTER FY20

The purpose of this message is to disseminate and share lessons learned from select shore activity weight handling accidents, near misses, and other unplanned occurrences so that similar events can be avoided and overall safety and efficiency of operations can be improved.

For the second quarter of FY20, 76 Navy weight handling accidents (61 crane and 15 rigging) were reported, as compared to 67 for the first quarter of FY20. Although the number of significant accidents is lower this FY than last year to date, significant accidents increased slightly in the second quarter compared to the previous quarter. The number of significant crane accidents increased slightly from 11 to 12 and, the number of significant rigging accidents increased from 3 to 5. As discussed below, dropped loads were a strong contributor to the increase in significant accident reporting. This reinforces the need to ensure that personnel are kept from reaching under or working under loads and that crane and rigging teams ensure that loads are secure.

Despite the increase in the total number of significant accidents this quarter, none of the accidents met OPNAV reportable criteria. Contractor accidents decreased by approximately 40 percent in the second quarter as 8 crane accidents and no rigging accidents were reported. As a result, the number of significant contractor accidents decreased by 63 percent.

DROPPED LOADS

Ten dropped load accidents were reported, six crane and four rigging. One rigging accident resulted in a minor injury and is discussed in paragraph 4. While lifting a shot of anchor chain using a mobile crane, a synthetic sling detached from the crane hook dropping the chain to the ground. The end of an anchor chain fell from the bed of a trailer during removal. During the lift of a component (transducer assembly) shipboard, the component slipped from the rigging when a bolt attached to the rigging was removed causing the component to drop to the deck. A metal identification tag on a shaft bearing dislodged and dropped to the ground while the bearing was lowered onto the shaft. A rigger was attempting to rotate a component when the cart it was sitting on rolled allowing one end of the component to hit the ground. A manual chain hoist attached to a portable A-frame released under load causing the load to drop onto the deck. A vent fan motor fell to the deck when a rigger utilized an incorrect rigging configuration to suspend the load while interference was removed. While rigging a rotor into position, a ship mounted trolley support brace failed, causing the rotor to drop a small distance onto the housing. A test load dropped approximately two inches before the brake stopped the load causing the crane to be overloaded.

Lessons Learned: Dropped load accidents increased by 50 percent and one resulted in a minor personal injury. A review of the data identified that personnel should focus on eliminating errors during the rigging process as 5 of the 10 dropped load accidents occurred due to improper rigging. Because of this increase, NAVCRANECEN will be issuing a weight handling program brief (WHPB) to encourage personnel to focus on risk mitigation and eliminating errors during the rigging process. The first anchor chain accident occurred because the sling detached from the hook (improper rigging) while the load was suspended. The activity took long-term action to develop a standard operating procedure for the lift and conducted additional training to ensure personnel utilized the appropriate method to attach this type of load. The cause of the second anchor chain accident was determined to be insufficient planning and inadequate risk mitigation. Personnel did not take into account how close the chain was to the edge of the trailer and movement of the chain as it was hoisted. Corrective actions included a crane safety stand-down and requirement for the rigger supervisor to approve all lift plans and rigging sketches prior to operations. The dropped transducer assembly occurred due to not ensuring the top-heavy load was stabilized while removing the rigging (improper rigging). The activity took actions to develop a lashing plan to secure the assembly to the cradle during installation. The metal identification tag was a temporary tag that was not identified during the pre-lift inspection of the load (improper rigging). The activity issued a training bulletin and briefed all weight handling personnel on the importance of inspecting the load prior to the lift. The activity determined that the component fell off the cart because it was not rigged at the center-of-gravity (improper rigging) and the cart was too small. The manual chain hoist failed as a result of incorrect re-assembly of the chain hoist following maintenance. The vent fan motor fell as a result of using an incorrect rigging configuration (improper rigging). The activity determined the employee lacked knowledge for securing the load. The individual attended training on the proper lashing of components. The investigation of the dropped rotor concluded that personnel used a component with excessive wear causing it to fail under load. The activity took action to revise the drawing and replace the rigging equipment with a different rigging system. The dropped test load that occurred while load testing a category 3 crane was caused by an equipment failure. The initial inspection of the hoist was inconclusive in determining a specific reason for the failure and the activity investigation is ongoing.

INJURIES

Three injuries were reported, two from rigging operations and one from a crane operation. A rigger's thumb was injured when it was pulled into the hand chain wildcat on a chain hoist. On a positive note, the injury was minor (bruising and swelling) due to the use of personal protective equipment (gloves). A rigger's finger was pinched (bruised) during work to remove debris from a concrete bucket suspended from a crane. During rigging work to install a fairing to the underside of a submarine, the rigging fell out of the attachment point resulting in a dropped load and minor injury to two riggers.

Lessons Learned: Two of the three injuries this quarter occurred as a result of personnel placing their extremities into or near a pinch point. A "pinch point" injury occurs when a person or part of a person's body is caught between a stationary object and a moving object. The load is commonly the moving object, but it can also be the rigging gear (hoist). These types of injuries can be prevented by applying risk management techniques during job planning and preparation.

Situational awareness is essential on the jobsite in order to recognize "pinch points" during weight handling operations, especially when space is restricted. When reaching for an object, always consider the possibility that you may be placing yourself or an extremity in a "pinch point" and stop if necessary. Needlessly placing your hand on components only increases the risk of getting it caught in a "pinch point". Lastly, always use clear and concise communications when commencing any movement of the load or operating the rigging gear. The dropped load accident that resulted in two minor injuries occurred because the personnel did not know the weight of the load. As a result, the rigging gear used was insufficient and failed. The activity took permanent corrective action to update the local instruction increasing the technical requirements and oversight for this lift.

OVERLOADS

Four overload accidents were reported in the second quarter. All four overloads occurred during crane operations. The administrative capacity of a category 3 crane was exceeded during load test/certification. The hook of a crane was overloaded to failure as a result of excessive side load caused when attempting to free the load chain of a fixture during testing. While attempting to lift an aircraft fuselage, the rigging gear was overloaded when the fuselage was not free to lift. A category 3 crane was overloaded while performing a lift on a constrained component.

Lessons Learned: The cause of the administrative overload was determined to be due to an error during the selection of the test weights. The actual weight was not identified or discussed during the pre-lift meeting. The activity corrective actions included a department-wide safety stand down and additional training for key personnel. The cause of the crane hook failure was due to the hoist chain becoming wedged between a test fixture and calibration machine. The operator used a pry bar to attempt to free the chain causing the hook to fail. The operator should have stopped and notified supervision of the problem before attempting to free the chain. The rigging gear overload during the lift of the fuselage occurred as a result of complacency and inattentiveness by personnel, who did not ensure the pins holding the fuselage to the stand were retracted prior to hoisting. The activity conducted additional personnel training and briefed personnel on ensuring appropriate tools are staged to disconnect the load from the platform. The activity identified that the category 3 crane was overloaded because personnel did not monitor the load indicating device while the crane was hoisting the constrained component as required by NAVFAC P-307, paragraph 10.5.2.

TWO-BLOCK

One crane accident and one rigging accident were reported as two-blocking events. The auxiliary hoist wire rope on a mobile crane retracted during routine crane startup contacting the anti-two-block device causing damage to the auxiliary sheave and pin. A pneumatic air hoist was two-blocked when a piece of wood decking wedged in the up control function.

Lessons Learned: The activity investigation determined that a likely computer malfunction occurred resulting in the hoist moving without input from the operator. The crane manufacturer's service technician advised the activity to replace the crane's computer.

NEAR MISSES

Activities reported 141 near misses (110 crane and 31 rigging) in the second quarter, as compared to 109 in the first quarter, an increase of 29 percent. This was the second straight quarter of increases in near miss reporting. Several months ago, NAVCRANECEN began issuing periodic WHPBs to recognize activities that are reporting "good" near misses, i.e., those where personal intervention prevented accidents. In the second quarter, several WHPBs (WHPB 20 -02, 20-03, 20-04, and 20-06) were issued recognizing various activities who are making a difference by reporting near misses to share with other Navy activities. Navy activities have responded by reporting near misses that would or could have resulted in significant accidents if not caught. One example included a supervisor who stopped a lift due to the mobile crane's counterweight not being engaged, thereby preventing a crane overload or even a potential overturned crane. This continued increase in near miss reporting affirms each command's value in their weight handling monitor programs, and directly results in the identification of near misses.

As discussed in paragraph 2, your efforts have led to an overall decline in significant accidents so far this fiscal year; however, significant accidents have increased slightly since the first quarter. Now is the time to redouble our efforts in identifying and documenting near misses, and sharing lessons learned.

SAFETY RECOGNITION

Weight handling program managers, operations supervisors, and safety officials should review the above lessons learned with personnel performing weight handling operations and share lessons learned from other activities with personnel at your activity. The current risk cannot be any higher. With the COVID-19 pandemic affecting many aspects of the Navy's weight handling program, WHPB 20-08 was issued and discusses the potential impact on deck plate personnel, supervisors, and managers involved in weight handling operations. Your invaluable efforts to maintain safety while providing unwavering support to ensure the Navy and Marine Corps are mission ready are needed now more than ever.

CRANE SAFETY ADVISORIES AND EQUIPMENT DEFICIENCY MEMORANDA

We receive reports of equipment deficiencies, component failures, crane accidents, and other potentially unsafe conditions and practices. When applicable to other activities, we issue a Crane Safety Advisory (CSA) or an Equipment Deficiency Memorandum (EDM). A CSA is a directive and often requires feedback from the activities receiving the advisory. An EDM is provided for information and can include deficiencies to non-load bearing or non-load controlling parts. A complete list of CSAs and EDMs can be found on the Navy Crane Center's web site.

CSA 096B – OPERATION OF BOOM HOIST PAWLS

1. Background:

A. CSA 096 required that activities identify and notify the Navy Crane Center (NCC) of any cranes with power actuated boom pawls that would engage the ratchet if the force or energy holding the pawl in the disengaged position is lost. Manually operated boom pawls were to be checked to see if failure of the operating linkage would result in the pawl engaging the ratchet. CSA 096 also required activities to identify and notify NCC of any cranes with power actuated boom pawls that did not have an interlock preventing the boom hoist from lowering when the pawl is in the engaged position and to prevent the pawl from engaging during boom hoist lowering.

B. CSA 096A re-issued CSA 096 requirements and added requirements for submittal of a Crane Alteration Request (CAR) to correct undesirable conditions found. Included in CSA 096A was a requirement that pawls shall not shift and engage the ratchet when the force of energy holding the pawl is lost and interlocks shall be present to prevent lowering and prevent the boom from lowering when the pawl is engaged.

C. Recently, a portal crane that had been checked in accordance with CSA 096A was shown to have a boom pawl interlock failure mode when the operator held in the boom pawl actuation switch while lowering the boom at half speed. Upon returning the master switch to the neutral position, the boom hoist run command was removed thus disabling the interlock and allowing the boom pawl to engage on a moving drum prior to the hoist decelerating to a complete stop. Evaluation of other cranes has identified at least one other class of portal crane with the same potential failure mode.

2. Direction:

A. Within 60 days of issuance of this CSA activities are to perform an engineering investigation and evaluation of all powered boom hoist pawl designs to ensure that circuitry or microprocessor controls exist to prevent engagement of the pawl during the time the boom is commanded to stop from a lowering motion until it has actually ceased movement.

B. For those cranes found to have powered boom pawls with undesirable operating characteristics, a CAR shall be submitted to correct the undesirable condition within 60 days of discovery. Pawl interlocks shall not allow the pawl to engage the ratchet when the boom is lowering, even while decelerating after a stop command, and shall prevent the boom from lowering when the pawl is engaged.

C. Mobile cranes are exempt from this CSA.

CSA 178B – SLINGS USING ESCO ONE-HALF INCH STAINLESS STEEL ONE-PIECE DUPLEX SLEEVES NOT MEETING REQUIRED DESIGN FACTOR

1. For questions or concerns referencing this message contact the POC listed.

2. Revision: CSA 178A provided information and direction regarding the potential of one-half inch diameter slings using ESCO one-half inch one piece duplex sleeves not developing the required design factor. This revision supersedes and cancels CSA 178A in its entirety.

3. Background:

A. CSA 178A alerted activities to the potential for one-half inch diameter slings using ESCO one-half inch one piece duplex sleeves not developing the required design factor. ESCO previously stated a design change was implemented in production for the one-half inch size one piece duplex sleeves that resulted in the sleeves having a thinner wall thickness and lighter in weight (approximately 115 grams vs. 135 grams) than the previous design.

B. ESCO has stated that the tooling for the one-half inch stainless steel one piece duplex sleeves had been adjusted and the re-designed sleeves have a greater wall thickness and weight (134 grams) similar to the original design. ESCO reported individual pull testing of the re-designed sleeves yielded efficiency results at or above the required ninety-five percent of the wire rope minimum breaking strength while maintaining the minimum 5:1 design factor.

C. Recent reports have indicated there are still under weight (approximately 115 grams) ESCO one-half inch one piece duplex sleeves in the federal supply system.

4. Direction:

A. Activities that fabricate slings using the re-designed ESCO one-half inch stainless steel one-piece duplex sleeves are not subject to a 4,000 pound down rating provided the weight of each individual sleeve is verified to weigh not less than 132 grams prior to fabrication of the sling. Documentation of weight verification of the sleeves shall be retained for the life of the sling.

B. Activities with any slings remaining in service fabricated between October 2006 and issuance of Ref A using ESCO one-half inch stainless steel one-piece duplex sleeves where the weight of each individual sleeve was not verified shall down rate the sling Capacity to 4,000 pounds or less. This down rating also applies to slings where the manufacture date of the sleeve cannot be determined.

C. This down rating is based upon slings fabricated using one-half inch diameter, 6 x 19 or 6 x 36, right regular lay, bright, EIP, IWRC wire rope. Slings fabricated with the subject sleeve using other constructions, lay, or grade of wire rope shall be removed from service or have documentation proving (by destructive test) the adequacy of the sling assembly to achieve a 5:1 design factor.

CSA 238B – EXCEPTIONS TO NAVFAC P-307 REQUIREMENTS DUE TO COVID-19 PANDEMIC

1. For questions or concerns referencing this message contact the POC listed.

2. Revision: CSA 238A provided activities with exceptions to specific NAVFAC P-307 requirements in the areas of weight handling equipment (WHE) due to the ongoing disruption in operations from the COVID-19 pandemic. This revision supersedes and cancels Ref A.

3. Background:

A. The purpose of this CSA is to provide activities with exceptions to specific NAVFAC P-307 requirements in the areas of WHE maintenance, certification, engineering, training and licensing, rigging, accident reporting, and contractor crane operations due to the ongoing disruption from the COVID-19 pandemic.

B. These exceptions shall only be utilized when reduction in personnel from COVID-19 pandemic effects will disrupt continuity of mission support due to adherence to NAVFAC P-307 requirements. Documentation of use of these exceptions shall be maintained in the appropriate equipment or personnel history file until such time that normal periodicity is regained. These exceptions do not apply to Special Purpose Service WHE as defined in NAVSEA 0980-030-7000.

4. Direction:

A. Maintenance. NAVFAC P-307, paragraph 3.6 provides the certifying official authority to defer a maintenance inspection, lubrication, or servicing/ maintenance schedule during an emergent condition, such as the COVID-19 pandemic. No additional exception is required.

When paragraph 3.B below is utilized to extend the certification, an additional technical evaluation is not required to extend the maintenance inspection and or servicing/maintenance. If the certification and typically concurrent maintenance inspection and resulting servicing/maintenance are delayed for 180 days or longer, the certifying official may opt to delay the maintenance inspection and maintenance/servicing of package hoists, as defined by NAVFAC P-307, until the next annual certification; however, this will require a documented technical evaluation per the requirements of NAVFAC P-307 paragraph 3.6. This 365-day deferral does not cover package hoists installed on top-running bridge cranes or used in the following applications: ordnance handing, molten metals, and "hazardous area applications" as defined by the National Electrical Code. This 365-day deferral is from the date of the previous annual certification, not the date of certification extensions.

B. Certification. Crane certifications that expire in the next 60 days may be extended by 60 days by the certifying official; commanding officer approval is not required. This extension is independent of the certification extension allowed by NAVFAC P-307, paragraph 4.5.1 (a condition inspection is not required before utilizing the extension provided in this CSA and the paragraph 4.5.1 extension may be invoked prior to this extension or after this extension expires). The 60-day extension shall start from the day of original certification expiration (or expiration of the certification extension if the certification was extended in accordance with paragraph 4.5.1). For certifications previously extended by 60 or 120 days in accordance with CSA 238A, an additional 60-day extension is granted for a maximum of 180 days. Cranes with voided certifications due to work performed on load bearing, load controlling, or operational safety devices shall be re-certified in accordance with NAVFAC P-307. Extensions of certifications of cranes third party certified by NAVCRANECEN shall follow Ref C, appendix M, paragraph 1.2. A new NAVCRANECEN certification to accompany the activity certification extension is required. NAVFACINST 11230.1 provides direction for 30-day extension for ground level crane trackage certification and 45-day extension for elevated crane trackage certification. NAVFAC Letter Ser PW/159, Subj: COVID-19 Public Works Certification and License Impacts, provides an allowance of 60-day extension of trackage certification with notification to NAVFAC EXWC Rail Program Manager.

C. Engineering. The forwarding period for local CARs may be delayed by a maximum of 60 days.

D. Personnel Training. Category 3 non-cab operator retraining may be delayed by 60 days for a maximum of 180 days.

E. Operator Licensing. Licenses that will expire within the next 60 days may be extended by a maximum of 180 days. This includes expiration due to expired physical examinations. License suspension following a crane accident is not mandatory.

F. Rigging. NAVFAC P-307, section 14 equipment requiring periodic inspection and test may be extended by 180 days. This extension is independent of the exception for inspection and test extension in NAVFAC P-307, paragraph 14.4.4. Ensure pre-use and post-use inspections of equipment are being accomplished in accordance with NAVFAC P-307, paragraph 14.4.2.

G. Accident and Near Miss Reporting. Accident, near miss, and unplanned occurrence final reports may be delayed by 30 days (60 days total). Initial notification shall be in accordance with NAVFAC P-307, paragraph 12.6.1. Crane and rigging operations may continue, with supervisory permission and correction of proximate cause, following lower threshold crane accidents only. Lower threshold crane accidents are hereby defined as "avoidable contact" type accidents with no damage, not even a paint scrape (NAVFAC P-307, paragraph 12.4.1.g).

H. Contractor Crane Operations. For contractor crane operations that present no exposure and no risk to Navy personnel, Navy property, or the general public (i.e., only contractor exposure and risk, such as a controlled area where a building is being constructed), contractor crane operations oversight may be reduced at the contracting officer's discretion.

I. Other Reports or Data. Other reports or data due to NAVCRANECEN as required by NAVFAC P-307 may be delayed by 60 days. Initial notification of deficiencies shall continue to be accomplished in accordance with NAVFAC P-307, paragraph 3.1.1. Activity provided information in support of NAVCRANECEN evaluations shall be provided 60 days from scheduled evaluation date and activity response is required 60 days after receipt of the final NAVCRANECEN evaluation report.

J. Report equipment utilizing the exception listed in paragraphs 3.B and 3.F to NAVCRANECEN via email: NFSH_NCC_Compliance@navy.mil. This report shall include end user UIC and name, local crane number and new certification expiration date. Rigging equipment inspection deferrals may be reported more generally when the equipment does not have equipment numbers.

K. Resolution. NAVCRANECEN will issue additional message(s) canceling or modifying the interim deviations to NAVFAC P-307 as conditions change. Additional extensions beyond this CSA are not anticipated at this time.

WEIGHT HANDLING PROGRAM BRIEFS

Weight Handling Program Briefs (WHPBs) are provided for communication to weight handling personnel. The following briefs were issued during the past quarter.

The briefs are not command-specific and can be used by your activity to increase awareness of potential issues or weaknesses that could result in problems for your weight handling program. They can be provided directly to personnel, posted in appropriate areas at your command as a reminder to those performing weight handling tasks, or used as supplemental information for supervisory use during routine discussions with their employees. When Navy Shore Weight Handling Program Briefs are issued, they are also posted in the Accident Prevention Info tab on the Navy Crane Center's web site at http://www.navfac.navy.mil/ncc.

Navy Crane Center point of contact for requests to be added to future WHPB distribution is nfsh ncc crane corner@navy.mil.

Navy Shore

Weight Handling Program

Brief

Title: "Good" Crane and Rigging Near Miss Reports

Target Audience: Weight Handling Program and Crane Oversight Personnel

During recent weeks, multiple "good" near misses have been submitted which help prevent accidents. NCC continues to stress the importance of identifying and reporting "good" near misses which can be used for lessons learned at all activities. Well done (Bravo Zulu) to the following activities that identified these recent near misses:

- **NAVFAC Southeast, NAS Jacksonville** - A potential injury was prevented when an "all stop" was called after observing a rigger's hand in a pinch point during crane operation.
- **NSWCCD DET Puget** - A potential overload rigging accident was prevented when personnel stopped a forklift operator from lifting a set of cement gangway stairs using a certified forklift attachment rigged with gear having an insufficient capacity.
- **NAVFAC Far East, Sasebo** - Damage to a load was avoided when personnel identified that the rigging (slings) was in the wrong lift configuration.
- **TRIREFFAC Bangor** - As a platform was being hoisted, a rigger identified that one of the seating stands for the platform appeared loose. The stand came off in the hand of the rigger when it was checked for tightness.
- **Norfolk Naval Shipyard** - A potential damaged load was prevented when a lift was stopped due to the identification of a rigging gear hold back still attached to the component.

7 May 2020 | **Navy Crane Center** | *WHPB 20-10*

Navy Shore

Weight Handling Program

Brief

Title: Dropped Load Accidents on the Increase

Target Audience: Weight Handling Program Personnel

Although there has been a reduction in overall significant accidents in FY20, there has been a substantial increase in dropped load accidents in the second quarter, which is concerning due to the high risk for personnel injury. Fortunately, only one resulted in minor injuries to two riggers. As a result, NAVCRANECEN is issuing this WHPB to share lessons learned that will help reverse this negative trend. The majority of dropped load accidents occurred due to **inadequate risk mitigation and improper rigging.** These accidents could have been prevented by slowing down and paying attention to the rigging to ensure the load was secure. Specific examples include:

- **While installing a fairing on a submarine, eyebolts pulled free at the attachment point resulting in a dropped load and minor injury to two riggers.** This accident occurred because personnel did not know the correct weight of the load, and as a result, chose incorrectly sized eyebolts which were also installed in the wrong holes.
- **The end of an anchor chain fell from the bed of a trailer during removal.** Personnel did not account for how close the chain was to the edge of the trailer or the movement caused during hoisting due to chain length (inadequate risk mitigation). A photo of the dropped anchor chain is shown.
- **A rigger was attempting to lift a component when the cart it was sitting on rolled, allowing one end of the component to hit the ground.** The investigation identified that the component fell off the cart because the rigging did not capture the component's center-of-gravity (improper rigging) and the cart was too small and not adequately wedged to prevent movement (inadequate risk mitigation).

2 June 2020 | **Navy Crane Center** | *WHPB 20-11*

Navy Shore Weight Handling Program Brief

Title: "Good" Crane and Rigging Near Miss Reports

Target Audience: Weight Handling Program and Crane Oversight Personnel

During recent weeks, multiple "good" near misses have been submitted which help prevent accidents. NCC continues to stress the importance of identifying and reporting "good" near misses which can be used for lessons learned at all activities. Well done (Bravo Zulu) to the following activities that identified these recent near misses:

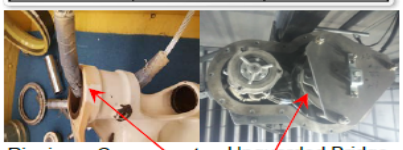
- **NSWC Detachment Bremerton** - The lift of a staircase using a forklift with a jib boom attachment was stopped due to concerns with the weight of the load. The weight was verified and would have exceeded the capacity of the rigging configuration.
- **Portsmouth Naval Shipyard** - A lift was stopped when the hand chain of a chain hoist was observed to be looped around a handle on a workbench.
- **NSWC Panama City** - While removing slack from the rigging, a team member noticed that the sling was wrapped around an appendage on the load and stopped the lift.
- **TRIREFFAC Bangor** - An all stop was called during a lift when a tagline was observed wrapped around the dry dock's hand rail.
- **Pearl Harbor Naval Shipyard** - The lift of a welding machine was stopped when personnel noticed that the top portion of the machine started to separate from the lower portion due to multiple missing fasteners.

11 June 2020 | **Navy Crane Center** | *WHPB 20-12*

Navy Shore Weight Handling Program Brief

Title: Pinch Points and Hand Injuries

Target Audience: All Weight Handling Program Personnel



Rigging a Component | Unguarded Bridge Crane Brake

Pinch Points

Finger in a pinch point

Pinch Point is defined as, "any point at which it is possible for a person or part of a person's body to be caught between a moving and stationary object(s)."

Over the past few months, several weight handling accidents and near misses have been reported that involved employees placing their hands in a pinch point, one of which **resulted in a significant injury**. A historical review of reported injuries identified that the majority of injuries occur to the hand and fingers. Examples of "pinch point" related hand injuries and how they can be minimized is discussed below:

- **A rigger's finger was pinched while emptying a cement tub with a tilting mechanism when the rigger's finger was caught between the bail and the tub**. **Being aware of pinch points created** by objects that move and come into direct or close contact with relatively fixed objects (e.g., loads in close proximity to bulkheads or other fixed equipment, loads that are swept by the rigging, suspended loads near fixed or mobile equipment). Always pay attention to where your hands are when seating or manipulating a load.
- **A diver's finger was injured when it was pinched between a shackle and cradle while manipulating the shackle. Use extreme caution when attaching or manipulating rigging gear.** Several of the subject injuries have occurred while individuals have attempted to position or operate rigging gear.
- Specific pinch point hazards, locations (e.g., where in the process), and mitigating actions should be discussed at all pre-job briefs. **Simply stating that pinch points exist is not sufficient.** Briefs should stress to individuals to be careful with regard to where they are placing their hands. Supervisors should stress the importance of using gloves to minimize the potential for injury. Lastly, always remember that if an operation cannot be completed without placing your hand in a pinch point, stop and notify your supervisor.

18 June 2020 | **Navy Crane Center** | *WHPB 20-13*

Navy Shore Weight Handling Program Brief

Title: Lower Threshold Crane Accidents

Target Audience: Weight Handling Program and Crane Oversight Personnel

Influenced by COVID-19, in March 2020, NAVCRANECEN issued Crane Safety Advisory (CSA) 238 which defined lower threshold crane accidents (LTCAs) and also provided some relief with regard to required actions in an effort to minimize production impact. As with near misses, reporting LTCAs is extremely important as it demonstrates you clearly understand the NAVFAC P-307 crane accident definition and are professional in that you stop and report the event, even if no damage occurred. Such events most likely happen at every command but are often not reported. NAVCRANECEN Accident Branch and evaluation teams view the reporting of LTCAs as a positive and often commend activities in their evaluation reports if LTCAs are being identified. As the graph illustrates, LTCA reporting remains fairly stagnant over the last few years. We believe by slightly modifying required actions for this type of event, we can increase reporting and crucial lessons learned in this critical area. Please ensure you communicate the above thoughts and the new allowances.

	2015	2016	2017	2018	2019	2020	Grand Total
Crane Near Miss Report	133	299	254	222	281	254	1443
Lower Threshold Crane Accident (LTCA) Report	5	27	33	27	31	25	148
Grand Total	138	326	287	249	312	279	1591

Annual Navy crane accident and near miss data since 2015. LTCA reports shown in blue.

- A **LTCA is defined as "an avoidable contact" type accident (P-307, paragraph 12.4.1.g) with no damage (not even a paint scrape).** This definition will be added to the upcoming revision of NAVFAC P-307. Even though LTCAs are accidents per the P-307 definition, reporting these events is seen as a sign of activity maturity and are viewed positively.
- **As long as the cause is corrected and the supervisor approves, CSA 238 (superseded by CSA 238A and subsequently, 238B) allows crane operations to continue after a LTCA.** This action will allow work to resume once supervisory approval is obtained and the proximate cause is understood and corrected.
- Healthy accident prevention programs are built on a strong foundation of a robust monitoring program, along with proactive near miss and LTCA reporting, to ultimately reduce accident severity.

14 July 2020 **Navy Crane Center** *WHPB 20-14*

Navy Shore Weight Handling Program Brief

Title: Draft NAVFAC P-307

Target Audience: All Weight Handling Program Personnel and Activity Management

The current draft of the 2021 revision to NAVFAC P-307, *Weight Handing Program Management*, is available for review and comment.

- The NAVFAC P-307 2021 draft dated 7-9-2020 and NAVFAC P-307 Review Activity Comment Sheet template are located on the Navy Crane Center website: https://hub.navfac.navy.mil/webcenter/portal/ncc?_afrLoop=2021027107673173#!%40%40%3F_afrLoop%3D2021027107673173%26_adf.ctrl-state%3D7bx3bpo94_56.
- Additions within the draft are identified by blue and underlined text while deletions are identified by ~~red and strikethrough text~~.
- Appendix S is not included at this time, but will be issued at a later date for comment to those activities that perform SPS operations.
- Administrative comments regarding references, grammatical, typographical or formatting errors need not be submitted as these will be corrected prior to publication.
- Please forward all comments utilizing the Review Activity Comment Sheet template to Navy Crane Center at NAVFAC_NCC_P307_ACTIVITIES_REVIEWS@navy.mil (NMCI display name NAVFAC NCC P307 2021 ACTIVITIES REVIEWS) no later than 1 October 2020.
- A tasker has been entered into the system for NAVFAC commands.
- Navy Crane Center will hold outreach meetings, potentially in early CY 2021, to review and discuss upcoming changes to NAVFAC P-307 – further details to be provided.

15 July 2020 **Navy Crane Center** *WHPB-20-15*

PROPER INSULATION OF WIRE CONNECTIONS NOT MADE AT TERMINAL STRIPS

Navy Crane Center has collected multiple reports in recent years of short circuits associated with bolted wire connections. This article discusses the relevant NFPA 70 National Electric Code (NEC) requirements, NAVCRANECENINST 11450.2A Design of Weight Handling Equipment guidance, and standard electrical practices relevant to these and related types of connections.

Wire connections for Navy weight handling equipment are recommended to be made at a terminal strip. Paragraph 2-5.11.(m).1 of the NAVCRANECENINST 11450.2A does allow an exception for motor, brake, and collector shoe wire connections made using split-bolts, pre-insulated compression splice connectors, lugged and connected with nuts, bolts, flat washers and lock washers, or other Nationally Recognized Testing Laboratory listed connectors designed for the application. With the exception of some listed connectors and pre-insulated, compression splice connectors which are not maintenance friendly, these connections require particular care in ensuring they are properly insulated to avoid shorting together or shorting to the equipment.

The NEC gives no specific guidance for how this insulation is to be accomplished, but gives the general requirement in paragraph 110.14(B) that "all splices and joints shall be covered with an insulation equivalent to that of the conductors or with an identified insulating device. If the installer or maintainer choses tape as the insulating means, the NAVCRANECENINST 11450.2A provides more specific guidance by stating: "The innermost layers should be varnished cambric (VC) tape with two additional types of tape used over the cambric layer." This innermost layer provides durable mechanical protection against abrasion from the sharp edges of the connection, while also providing electrical insulation. If adhesive type VC tape is used, apply it with the adhesive side up to facilitate ease of removal during future maintenance.

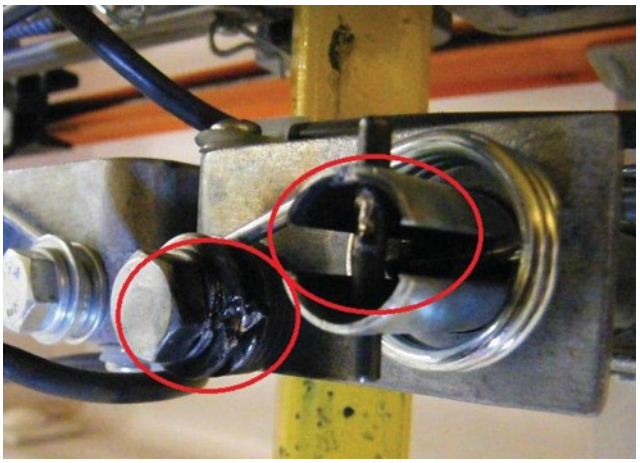
Choose the additional layers according to the needs of the application and local shop practices, taking into account potential moisture and UV exposure. For additional information on best practices for taping methods, the Electrical Construction Maintenance Magazine provides an excellent web-based article titled "Electrical Taping Skills: A Lost Art?" at https://www.ecmweb.com/content/article/20897095/electrical-taping-skills-a-lost-art.

One down side to taping a connection is that this method can result in a very bulky connection, and in some cases, the bulkiness of this method results in a higher likelihood of mechanical wear within a particularly tight motor or brake connection box. It is for these cases that the latest revision of the NAVCRANECENINST 11450.2A allowed for "pre-insulated compression splice connectors." Switching to this type of connection has a downside for future maintenance because they are very difficult to remove without cutting the conductors, resulting in shortened motor or brake leads. Another alternative is the "identified insulating device" allowed for in NEC paragraph 110.14(B) which may not be any less bulky, but may be less prone to mechanical damage.

One final area of concern reported to Navy Crane Center by activities experiencing problems is collector shoe leads and other connections not secured in an enclosure. As these are parts of a moving system, particular care must be taken to ensure that these connections are appropriately insulated and secured to protect the insulation from mechanical damage.

In conclusion, all Navy weight handling equipment wiring connections not landed at a terminal strip must have care taken that they are properly insulated in accordance with the guidance and requirements of the NEC and NAVCRANECEN 11450.2A. Additionally, these connections shall be inspected and maintained in accordance with the requirements of the NAVFAC P-307 Weight Handling Program Management to ensure that the insulation retains its integrity and the connections remain tight over the life of the crane.

Collector Assembly



Contact Points

WEIGHT HANDLING PROGRAM SAFETY VIDEOS

Accident Prevention provides seven crane accident prevention lessons learned videos to assist activities in raising the level of safety awareness among their personnel involved in weight handling operations. The target audiences for these videos are crane operations and rigging personnel and their supervisors. These videos provide a very useful mechanism for emphasizing the impact that the human element can have on safe weight handling operations.

Weight Handling Program for Commanding Officers provides an executive summary of the salient program requirements and critical command responsibilities associated with shore activity weight handling programs. The video covers NAVFAC P-307 requirements and activity responsibilities.

Mobile Crane Safety covers seven topics: laying a foundation for safety, teamwork, crane setup, understanding crane capacities, rigging considerations, safe operating procedures, and traveling and securing mobile cranes.

"Take Two" Briefing Video provides an overview on how to conduct effective pre-job briefings that ensure interactive involvement of the crane team in addressing responsibilities, procedures, precautions, and operational risk management associated with a planned crane operation,

Safe Rigging and Operation of Category 3 Cranes provides an overview of safe operating principles and rigging practices associated with Category 3 crane operations. New and experienced operators may view this video to augment their training, improve their techniques, and to refresh themselves on the practices and principles for safely lifting equipment and materials with Category 3 cranes. Topics include: accident statistics, definitions and reporting procedures, pre-use inspections, load weight, center of gravity, selection and inspection of rigging gear, sling angle stress, chafing, D/d ratio, capacities and configurations, elements of safe operations, hand signals, and operational risk management (ORM). This video is also available in a standalone, topic driven, DVD format upon request.

All of the videos can be viewed on the Navy Crane Center website:

http://www.navfac.navy.mil/navfac_worldwide/specialty_centers/ncc/about_us/resources/safety_videos.html.

SHARE YOUR SUCCESS

We are always in need of articles from the field. Please share your weight handling/rigging stories with our editor nfsh_ncc_crane_corner@navy.mil.