

Weight Handling Safety

Title: Load Moment Test Configuration for Mobile Crane Testing

Target Audience: All personnel associated with mobile crane load testing.



CAUTIONS

- ✓ Lift load only high enough to perform required test
- ✓ Always lift test load well within maximum radius, then boom down to pre-measured radius stopping at least once to check brakes
- ✓ Perform all movements slowly
- ✓ REMAIN ALERT AT ALL TIMES

NEGATIVE TREND ALERT

- Several recent incidents have identified weaknesses during mobile crane load testing for cranes with telescopic booms, especially in determining the correct boom length and radius to be used during the Load Moment Test.
- Per NAVFAC P-307, Appendix E, paragraph 5.4.2.2:
“Load Moment = Capacity X Radius”
 1. Determine the shortest required boom length which must be a minimum of 50% of the maximum boom length using crane’s load chart or working range diagram (not including power pin flies or jibs), AND where all boom sections are partially extended.
 2. To identify the correct radius, multiply each radius by its rated load until the resulting load moment value decreases. Use the radius that results in the LARGEST load moment AND that also ensures the resulting test load clears ALL crane components during crane rotation.
 - NOTE: Cranes equipped with multiple boom modes must have multiple load charts checked to ensure maximum load moment is selected.
 3. If the preliminary test load determined in step 2 will NOT safely clear the crane, select a longer radius until clearance is obtained.
 4. Using the load chart, multiply the capacity at the radius determined in step 2 or step 3 (as applicable) by 1.05 to obtain the minimum test load for the load moment test.

CONTACT NAVCRANECEN IN-SERVICE ENGINEERING FOR QUESTIONS AND/OR ASSISTANCE NEEDED WITH MOBILE CRANE LOAD TESTING

SAFETY