

**CONTRACTOR CRANE START – UP INSPECTION CHECKLIST (PRE-OPERATIONAL - EACH SHIFT)**  
**CRANES AND DERRICKS USACE EM 385-1-1 SECTION 16.D.08**  
**(TO BE USED FOR CONTRACTS IN ACCORDANCE WITH USACE EM 385-1-1 15 SEPTEMBER 2008)**

**CONTRACT NUMBER:** \_\_\_\_\_ **CONTRACTOR:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

**INSPECTION COMPETENT PERSON:** \_\_\_\_\_

**CRANE MAKE:** \_\_\_\_\_ **MODEL:** \_\_\_\_\_ **SERIAL #:** \_\_\_\_\_ **YEAR:** \_\_\_\_\_

**SPECIAL NOTES:**

- 1) Inspections shall be as required by manufacturer and in accordance with ASME and OSHA (16.D.01)
- 2) Provide GDA 24 hours notice (16.D.03)
- 3) Inspections shall be performed by a qualified person (16.D.0i)
- 4) Include functional testing (16.D.07b)
- 5) Validate documentation of: (as applicable)
  - (a) Initial Inspection (required prior to use on all NAVFAC projects after crane assembly - 16.D.07);
  - (b) Periodic Inspection/Comprehensive (annually or as recommended by the manufacturer - 16.D.10)
  - (c) Frequent Inspections (required at monthly intervals - 16.D.09)

<b>CONTRACTOR START UP INSPECTION (MINIMUM):</b>	Pass	Fail	N/A
1. Operator qualifications: 16.B.01; 16.B.01(b); & 16.B.03 (a-c)			
a. proof of practical examination (16.b.05)			
b. Proof of physical qualification examination (06.B.06)			
2. Validate the following documents are in the cab at all times (16.G.01)			
a. Operating Manual			
b. Manual Load Rating Chart			
c. Visible Load Chart			
d. Crane Log Book			
3. Record of crane and hoisting equipment tests and inspections – maintained on site (16.D.02)			
*** Refer to 16.F & 16.F.02 and 16.F.03 for operational and load testing			
4. Verify a completed Certificate of Compliance is with the crane			
5. Verify loads will not exceed the cranes rated capacity for the crane configuration.			
6. Verify crane lifts will not meet “critical lift” definition.			
*** If they do prepare/ submit a critical lift plan with Activity Hazard Analysis before proceeding with lift. ****			
7. Validation that all safety devices as listed 16.E.01 are on each crane			
8. Validation that all safety devices are in proper working order (16.E.02)			
9. Verify load swing or counterweight path will not be obstructed , adequate clearance from electrical sources is maintained, and load will not travel over personnel			
10. Verify use of standard communication/signal system is understood by all involved in lift.			
11. Control mechanisms for proper operation			
12. Brake actions to ensure brakes are functioning normally and that there is no slippage, excessive play or binding. Exercise brakes to assure they are dry.			
13. Control mechanisms for excessive wear of components and contamination by lubricants or other foreign matter;			
14. Operator aids and other safety devices for proper functioning and accuracy of settings;			
15. Chords and lacing for damage, bent members, cracked welds, etc.;			

	Pass	Fail	N/A
16. Hydraulic and pneumatic systems for deterioration or leaking – with particular emphasis given to those that flex during normal operation;			
17. Hooks and latches for deformation , chemical damage , cracks, and wear;			
18. Rope for proper spooling onto the drum(s) and sheaves(s) and rope reeving for compliance with crane or derrick manufacturer’s specifications;			
19. Electrical apparatus for proper functioning, signs of excessive deterioration, dirt, and moisture accumulation;			
20. Tires (when in use) for recommended inflation pressure and condition;			
21. Ground conditions around the equipment for proper support, including ground settling under and around outriggers and support foundations, ground water accumulation, or similar condition;			
22. Hydraulic system for proper fluid level;			
23. The equipment is in level position, both shift and after each move and setup;			
24. Operator cab windows for significant cracks, breaks or other deficiencies that would hamper the operator’s view			
25. Safety devices and operational aids for proper operation;			
26. Wedges and supports for looseness or dislocation(climbing tower cranes);			
27. Braces and guys supporting crane masts for safe condition and proper tension; anchor bolt base connections for tightness or retention of preload; wedges and supports of climbing cranes for tightness and proper positioning;			
28. For derricks, inspect all chords and lacing, tension in guys, plump of the mast, and derrick mast fittings and connections for compliance with the manufacturer’s recommendations;			
29. Barge or pontoon ballast compartments for proper ballast; a. deck loads for proper securing; b. chain lockers; c, storage; d. fuel compartments; e. battening of hatches; f. firefighting and lifesaving equipment in place and functional; g. hull void and compartments sounded for leakage (floating cranes and derricks);			
30. Wire Rope Inspection per 16.D.12 (Page3) of this inspection			
Competent person shall perform this inspection for each shift, visually inspecting all running ropes and counterweight ropes and trolley ropes, if provided. <i>Visual inspection shall concentrate on identifying apparent deficiencies in wire rope as categorized below. Opening of wire rope or booming down is not required as part of this inspection</i>			
Wire rope inspection results :			
CATEGORY 1: <i>(Competent Person to make immediate determination whether it constitutes a safety hazard. If so wire rope can’t be used unless provisions of 16.D.12f Removal from Service are followed</i>			
31. Distortion of wire rope structure such as kinking, crushing, unstranding, birdcaging, main strand displacement, core failure or protrusion between the outer strands			
32. General corrosion;			
33. Electric arc (from a source other than power lines) or heat damage;			
34. Severely corroded or broken wires at end connections; severely corroded, cracked, bent, or improperly applied end connections			

	Pass	Fail	N/A
<i>CATEGORY II: (Employer to make immediate determination whether it constitutes a safety hazard. If so wire rope can't be used unless provisions of 16.D.12f Removal from Service are followed</i>			
35. Number, distribution and type of visible wires are as per Table 16-2			
36 A diameter reduction of more than 5% from normal diameter due to loss of core support, internal or external corrosion, or wear of outside wires.			
<i>CATEGORY III: (Operations involving the use of the wire rope in question shall be prohibited. If so wire rope can't be used unless provisions of 16.D.12f Removal from Service are followed</i>			
37. Core failure or protrusion in rotation resistant ropes			
38. Electric contact with a power line OR			
39. A broken strand (rotation resistant ropes)			
CRITICAL REVIEW ITEMS: Particular attention should be given to:			
40. Rotational resistant wire rope in use;			
41 Boom hoist ropes and sections of rope subject to rapid deterioration such as at flange points, crossover points, and repetitive pickup points on drums;			
42. Sections in contact with saddles, equalizer sheaves, or other sheaves where rope travel is limited;			
43. Sections of the rope at or near terminal ends where corroded or broken wires may protrude; AND			
44. Sections subject to reverse bends and sections normally hidden during visual inspections, such as parts passing over outer sheaves			

CONTRACTOR USE OF THIS CHECKLIST DOES NOT WAIVE MEETING ALL INSPECTION REQUIREMENTS OF EM 385 15 SEPTEMBER 2008 16.D INSPECTION CRITERIA FOR CRANES