

SAFETY INSPECTION CHECK LIST FOR CONSTRUCTION EQUIPMENT U. S. Army Engineer Division, Mississippi Valley		Date of Inspection		
Contractor or Unit		Contract Number - Job Description		
Type of Equipment & Boom Length		Make, Model No., Identification		
Inspected by (Signature)		Approved by (Signature)		
<b>CRANES AND DERRICKS</b>		Yes	No	Not App
<b>NOTE:</b> Corps of Engineers General Safety Requirements (EM 385-1-1) references are shown in parentheses.				
1. Is a list of the required clearances from overhead power lines posted? If necessary to work near power lines, boom shall have insulating cage guard and load line shall have insulating link. (11.E.04, 11.E.07)				
2. Are load rating charts with the machine? (16.C.01, 16.C.13)				
3. Is a list of standard hand signals posted in cab? (16.C.10, 08.B.01, 08.B.02)				
4. Are shock absorbing boom stops installed on machine? (16.D.02)				
5. Has the manufacturer certified the boom stops? (16.D.02)				
6. Does the boom angle, levelness, and other indicators operate accurately? (16.D.01)				
7. Does the unit have a suitable fire extinguisher? (16.A.26)				
8. Are moving parts, gears, drums, shafts, belts adequately screened or guarded? (16.B.03)				
9. Is there adequate protection from hot pipes, etc? (16.B.03)				
10. Are steps, ladders, guard rails, provided for safe footing and access? (16.B.03, 21.A.01)				
11. Can lubrication and greasing be done safely? (16.B.13)				
12. Is the cab equipped with unbroken distortion free safety glass? (16.B.10)				
13. Is fuel tank located so that overflow and spills will not run into cab or come in contact with exhaust? (16.B.04)				
14. Is the unit shut down for fueling, servicing, etc? (16.A.14)				
15. Are slings, fastenings, fittings inspected daily by a qualified person? Is wire rope inspected by a competent person frequently? (Section 15)				
16. When wedge socket type fasteners are used, has the dead end been made secure against loosening? (15.B.04)				
17. Have the air tanks been tested and certified? (20.A.02)				
18. Are test and inspection records kept available as a part of the official project file? (16.A.01)				
19. Is there evidence of deformed, cracked, or corroded members in the crane structure or boom? * (ANSI)				
20. Do the drums have proper pawls or positive locking devices? (16.B.14)				
21. Is there sufficient cable available so as to allow three full wraps on the drum at all working positions? (16.C.09)				
22. Are daily inspections being made of all control mechanisms to assure that there is no maladjustment interfering with proper operation? *				
23. Are inspections being made, at least monthly, of control mechanisms for excessive wear of components, and contamination by lubricants, or other foreign matter? *				
24. Are frequent (daily to monthly) inspections being made of all safety devices? *				
25. Are daily inspections for deterioration, or leakage in air or hydraulic systems being made? *				
26. Are crane hook inspections being made frequently (daily to monthly) to assure that there are no cracks or that the normal hook throat opening has not increased more than 15% *				
27. Is there evidence of loose bolts or rivets? * (ANSI)				
28. Is there evidence of cracked or worn sheaves or drums? (15.F.04)				
29. Are parts such as pins, bearings, shafts, gears, rollers, and locking devices worn, cracked, or distorted?				
* (Ref Contract Special Clauses)		(Continued on reverse)		

**CRANES AND DERRICKS**

Yes    No    Not App

- 30. Is there evidence of excessive wear on brake and clutch system parts? \*
- 31. Is there evidence of excessively worn or damaged tires? \*
- 32. Is the power plant in good mechanical condition? \*
- 33. Are accessible areas within the swing radius of the rear barricaded? (16.C.08)
- 34. Has a boom hoist disengaging device been installed on cranes with cable supported booms? (16.D.02)
- 35. Is there a current set of operator's manuals available? (16.C.01)
- 36. Are cranes and derricks operated by qualified operators? (16.C.04)
- 37. Have lattice and Hydraulic cranes been equipped with a device to stop the load hoisting before the load block contacts the boom tip? (16.D.01)

**38. Crane Stability Test:**

Amount of counterweight: \_\_\_\_\_ lb.

Boom Angle	Distance from Center Pin to Load Line R (ft)	Tipping Load I (lb)		Moment R x I		Maximum Allowable Load L=0.75 I	
		With Outriggers	Without Outriggers	With Outriggers	Without Outriggers	With Outriggers	Without Outriggers
		20°	_____	_____	_____	_____	_____
40°	_____	_____	_____	_____	_____	_____	
60°	_____	_____	_____	_____	_____	_____	
80°	_____	_____	_____	_____	_____	_____	

**39. Performance Test:**

- a. Complete items 1-32 on this form.
- b. Determine performance test load (PTL) from the stability test above with the boom at the 80° position.  
PTL=(1.25)(L)
- c. Position the boom in the 80° position and allow the crane to lift, lower, and hold the performance test load.

**40. Remarks**