

# MONTHLY CRANE INSPECTION REPORT

Operator \_\_\_\_\_ Date \_\_\_\_\_ Shift \_\_\_\_\_  
 Unit Inspected \_\_\_\_\_ Serial Number \_\_\_\_\_

**Instructions:** Each crane must be inspected by a competent person prior to each shift it will be used, and completed before or during that shift. This inspection consists of observations for apparent deficiencies. Retain this document at least 3 months.

For wire rope, the inspection must consist of observation of wire ropes (running and standing), that are likely to be in use during the shift, for apparent deficiencies. Untwisting (opening) of wire rope or booming down is not required as part of this inspection. Each lift made with a Type II or Type III rotation resistant wire rope must be inspected by a qualified person and recorded. See 19 and 20 below.

Indicate "S" for satisfactory, "U" for unsatisfactory, "N/A" for not applicable.

Mechanical	Critical review items
S    U    N/A	S    U    N/A
1. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Control mechanisms are operating properly	21. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Rotation resistant wire rope in use
2. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Control and drive mechanisms show no excessive wear or contamination	22. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Wire rope used for boom hoists and luffing hoists, particularly at reverse bends
3. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Air, hydraulic, and other pressurized lines are free of leaks or deterioration	23. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Wire rope at flange, crossover, and repetitive pickup points on drums
4. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Hydraulic system has proper fluid level	24. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Wire rope at or near terminal ends
5. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Hooks and latches are free of deformation, cracks, excessive wear, or damage	25. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Wire rope in contact with saddles, equalizer sheaves, or other sheaves where rope travel is limited
<b>Wire Rope</b>	<b>Other Required Inspections</b>
6. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Wire rope reeving complies with the manufacturer's specifications	26. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Electrical apparatus has no excessive deterioration, dirt, or moisture accumulation
<b>Category I inspection criteria</b>	27. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Tires properly inflated and in good condition
7. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Wire rope is free of significant distortion (i.e., kinking, crushing, unstranding, etc.)	28. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Ground conditions provide proper support (See note 3)
8. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Wire rope is free of significant corrosion	29. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Equipment is level within specified tolerances (See note 4)
9. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Wire rope has no electric arc or heat damage (from sources other than power lines)	30. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Operator cab windows are free of significant cracks, breaks, or other deficiencies
10. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Wire rope end connections are properly applied	31. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Rails, rail stops, rail clamps, and supporting surfaces in proper condition
11. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Wire rope end connections are free of significant corrosion, cracks, bends, or wear	<input type="checkbox"/> An Other Required Inspections item(s) is unsatisfactory and deemed a safety hazard. The equipment must be taken out of service until corrected.
<input type="checkbox"/> A Category I item(s) is unsatisfactory and deemed a safety hazard. The equipment or hoist has been tagged-out and one of the following actions were taken:	<b>Safety Devices</b> (See note 5)
<input type="checkbox"/> Entire wire rope was replaced	32. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Crane level indicator — equipped with and operating properly
<input type="checkbox"/> Damaged portion was removed (no splicing) (See note 1)	33. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Boom stops operating properly
<b>Category II inspection criteria</b> (See note 2)	34. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Jib stops operating properly
12. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Running wire ropes have acceptable number of visible broken wires	35. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Foot pedal brakes equipped with locks
13. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Rotation resistant ropes have acceptable number of visible broken wires	36. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Hydraulic outrigger and stabilizer jacks have integral holding device/check valve
14. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Pendants or standing wire ropes have acceptable number of visible broken wires	37. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Equipment on rails have rail clamps and rail stops
15. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Wire rope diameter reduction of no more than 5 percent	38. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Horn — equipped with and operating properly
<input type="checkbox"/> A Category II item(s) is unsatisfactory. The equipment or hoist has been tagged-out and one of the following actions were taken:	<input type="checkbox"/> A Safety Device(s) is unsatisfactory. The equipment has been tagged and taken out-of-service until device is working properly
<input type="checkbox"/> Followed manufacturer's criteria for removal	<b>Operational Aids</b>
<input type="checkbox"/> Entire wire rope was replaced	<b>Category I inspection criteria</b>
<input type="checkbox"/> Damaged portion was removed (no splicing) (See note 1)	39. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Boom hoist limiting device — equipped with and operating properly
<b>Category III inspection criteria</b>	40. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Luffing jib limiting device — equipped with and operating properly
16. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Rotation resistant wire rope has no core failure (core protrusion, other distortion)	41. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Anti two-blocking device — equipped with and operating properly
17. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Wire rope has no apparent electrical contact with a power line	<input type="checkbox"/> A Category I item(s) is unsatisfactory. The temporary alternative measures (See note 6) were implemented
18. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Wire rope has no broken strand	<b>Category II inspection criteria</b>
<input type="checkbox"/> A Category III item(s) is unsatisfactory. The equipment or hoist has been tagged-out and one of the following actions were taken:	42. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Boom angle or radius indicator readable from operator's station
<input type="checkbox"/> Entire wire rope was replaced	43. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Jib angle indicator operating properly
<input type="checkbox"/> Damaged portion was removed (no splicing) (See note 1)	44. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Telescopic boom equipped with boom length indicator
Note: Repair of power line damaged rope is prohibited	45. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Load weighing device, load moment indicator, or load moment limiter — equipped with and operating properly
19. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Monthly total of number of lifts made by Type II rotation resistant rope _____	<input type="checkbox"/> A Category II item(s) is unsatisfactory. The temporary alternative measures (See note 7) were implemented
20. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Monthly total of number of lifts made by Type III rotation resistant rope _____	

For equipment manufactured after November 8, 2011, see notes for additional inspection items.

Remarks: \_\_\_\_\_

No corrective actions are required for above deficiencies.  
 Unsatisfactory items have been monitored \_\_\_\_\_ and determined not to be a safety hazard.  
(list)

Name/Signature of person conducting inspection: \_\_\_\_\_ Date of Inspection: \_\_\_\_\_  
**ORIGINAL** 162-FS-C2 17247

**Note 1: Removal from service** — 1926.1413(a)(4)

If a deficiency in Category I, II, or III is localized, the problem can be corrected by severing the wire rope in two; the undamaged portion may continue to be used. Joining lengths of wire rope by splicing is prohibited. If a rope is shortened under this paragraph, the employer must ensure that the drum will still have two wraps of wire when the load and/or boom is in its lowest position.

Repair of wire rope that contacted an energized power line is also prohibited.

**Note 2: Category II apparent deficiencies** — 1926.1413(a)(2)(ii)  
Category II apparent deficiencies in this category are:

Visible broken wires, as follows:

In running wire ropes: Six randomly distributed broken wires in one rope lay or three broken wires in one strand in one rope lay, where a rope lay is the length along the rope in which one strand makes a complete revolution around the rope.

In rotation resistant ropes: Two randomly distributed broken wires in six rope diameters or four randomly distributed broken wires in 30 rope diameters.

In pendants or standing wire ropes: More than two broken wires in one rope lay located in rope beyond end connections and/or more than one broken wire in a rope lay located at an end connection.

**Note 3: Ground conditions** — 1926.1412(d)(1)(x)

Ground conditions around the equipment for proper support, including ground settling under and around outriggers/stabilizers and supporting foundations, ground water accumulation, or similar conditions. This paragraph does not apply to the inspection of ground conditions for railroad tracks and their underlying support when the railroad tracks are part of the general railroad system of transportation that is regulated pursuant to the Federal Railroad Administration under 49 CFR part 213.

**Note 4: Equipment leveling** — 1926.1412(d)(1)(xi)

The equipment for level position within the tolerances specified by the equipment manufacturer's recommendations, both before each shift and after each move and setup.

**Note 5: Safety devices** — 1926.1415

The following safety devices are required on all equipment covered by this subpart, unless otherwise specified:

*Crane level indicator.* The equipment must have a crane level indicator that is either built into the equipment or is available on the equipment. If a built-in crane level indicator is not working properly, it must be tagged-out or removed. If a removable crane level indicator is not working properly, it must be removed. This requirement does not apply to portal cranes, derricks, floating cranes/derricks and land cranes/derricks on barges, pontoons, vessels or other means of flotation.

*Boom stops,* except for derricks and hydraulic booms.

*Jib stops* (if a jib is attached), except for derricks.

*Equipment with foot pedal brakes* must have locks.

*Hydraulic outrigger jacks and hydraulic stabilizer jacks* must have an integral holding device/check valve.

*Equipment on rails* must have rail clamps and rail stops, except for portal cranes.

*Horn.* The equipment must have a horn that is either built into the equipment or is on the equipment and immediately available to the operator. If a built-in horn is not working properly, it must be tagged-out or removed. If a removable horn is not working properly, it must be removed.

*Proper operation required.* Operations must not begin unless all of the devices listed in this section are in proper working order. If a device stops working properly during operations, the operator must safely stop operations. If any of the devices listed in this section are not in proper working order, the equipment must be taken out of service and operations must not resume until the device is again working properly. See §1926.1417 (Operation). Alternative measures are not permitted to be used.

**Note 6: Operational aids, Category I** — 1926.1416(d)

*Category I operational aids and alternative measures.* Operational aids listed in this paragraph that are not working properly must be repaired no later than 7 calendar days after the deficiency occurs. Exception: If the employer documents that it has ordered the necessary parts within 7 calendar days of the occurrence of the deficiency, the repair must be completed within 7 calendar days of receipt of the parts. See §1926.1417(j) for additional requirements.

(d)(1) Boom hoist limiting device.

(d)(1)(i) For equipment manufactured after December 16, 1969, a boom hoist limiting device is required. Temporary alternative measures (use at least one). One or more of the following methods must be used:

(d)(1)(i)(A) Use a boom angle indicator.

(d)(1)(i)(B) Clearly mark the boom hoist cable (so that it can easily be seen by the operator) at a point that will give the operator sufficient time to stop the hoist to keep the boom within the minimum allowable radius. In addition, install mirrors or remote video cameras and displays if necessary for the operator to see the mark.

(d)(1)(i)(C) Clearly mark the boom hoist cable (so that it can easily be seen by a spotter) at a point that will give the spotter sufficient time to signal the operator and have the operator stop the hoist to keep the boom within the minimum allowable radius.

(d)(1)(ii) If the equipment was manufactured on or before December 16, 1969, and is not equipped with a boom hoist limiting device, at least one of the measures in paragraphs (d)(1)(i)(A) through (C) of this section must be used.

(d)(2) Luffing jib limiting device. Equipment with a luffing jib must have a luffing jib limiting device. Temporary alternative measures are the same as in paragraph (d)(1)(i) of this section, except to limit the movement of the luffing jib rather than the boom hoist.

(d)(3) Anti two-blocking device.

(d)(3)(i) Telescopic boom cranes manufactured after February 28, 1992, must be equipped with a device which automatically prevents damage from contact between the load block, overhaul ball, or similar component, and the boom tip (or fixed upper block or similar component).

The device(s) must prevent such damage at all points where two-blocking could occur.

Temporary alternative measures: Clearly mark the cable (so that it can easily be seen by the operator) at a point that will give the operator sufficient time to stop the hoist to prevent two-blocking, and use a spotter when extending the boom.

(d)(3)(ii) Lattice boom cranes.

(d)(3)(ii)(A) Lattice boom cranes manufactured after Feb 28, 1992, must be equipped with a device that either automatically prevents damage and load failure from contact between the load block, overhaul ball, or similar component, and the boom tip (or fixed upper block or similar component), or warns the operator in time for the operator to prevent two-blocking. The device must prevent such damage/failure or provide adequate warning for all points where two-blocking could occur.

(d)(3)(ii)(B) Lattice boom cranes and derricks manufactured after November 8, 2011 must be equipped with a device which automatically prevents damage and load failure from contact between the load block, overhaul ball, or similar component, and the boom tip (or fixed upper block or similar component). The device(s) must prevent such damage/ failure at all points where two-blocking could occur.

(d)(3)(ii)(C) Exception. The requirements in paragraphs (d)(3)(ii)(A) and (B) of this section do not apply to such lattice boom equipment when used for dragline, clamshell (grapple), magnet, drop ball, container handling, concrete bucket, marine operations that do not involve hoisting personnel, and pile driving work.

(d)(3)(ii)(D) Temporary alternative measures. Clearly mark the cable (so that it can easily be seen by the operator) at a point that will give the operator sufficient time to stop the hoist to prevent two-blocking, or use a spotter.

(d)(3)(iii) Articulating cranes manufactured after December 31, 1999, that are equipped with a load hoist must be equipped with a device that automatically prevents damage from contact between the load block, overhaul ball, or similar component, and the boom tip (or fixed upper block or similar component). The device must prevent such damage at all points where two-blocking could occur. Temporary alternative measures: When two-blocking could only occur with movement of the load hoist, clearly mark the cable (so that it can easily be seen by the operator) at a point that will give the operator sufficient time to stop the hoist to prevent two-blocking, or use a spotter. When two-blocking could occur without movement of the load hoist, clearly mark the cable (so that it can easily be seen by the operator) at a point that will give the operator sufficient time to stop the hoist to prevent two-blocking, and use a spotter when extending the boom.

**Note 7: Operational aids, Category II** — 1926.1416(e)

*Category II operational aids and alternative measures.* Operational aids listed in this paragraph that are not working properly must be repaired no later than 30 calendar days after the deficiency occurs. Exception: If the employer documents that it has ordered the necessary parts within 7 calendar days of the occurrence of the deficiency, and the part is not received in time to complete the repair in 30 calendar days, the repair must be completed within 7 calendar days of receipt of the parts. See §1926.1417(j) for additional requirements.

(e)(1) Boom angle or radius indicator. The equipment must have a boom angle or radius indicator readable from the operator's station. Temporary alternative measures: Radii or boom angle must be determined by measuring the radii or boom angle with a measuring device.

(e)(2) Jib angle indicator if the equipment has a luffing jib. Temporary alternative measures: Radii or jib angle must be determined by ascertaining the main boom angle and then measuring the radii or jib angle with a measuring device.

(e)(3) Boom length indicator if the equipment has a telescopic boom, except where the rated capacity is independent of the boom length. Temporary alternative measures. One or more of the following methods must be used:

(e)(3)(i) Mark the boom with measured marks to calculate boom length,

(e)(3)(ii) Calculate boom length from boom angle and radius measurements,

(e)(3)(iii) Measure the boom with a measuring device.

(e)(4) Load weighing and similar devices.

(e)(4)(i) Equipment (other than derricks and articulating cranes) manufactured after March 29, 2003 with a rated capacity over 6,000 pounds must have at least one of the following: load weighing device, load moment (or rated capacity) indicator, or load moment (or rated capacity) limiter. Temporary alternative measures: The weight of the load must be determined from a source recognized by the industry (such as the load's manufacturer) or by a calculation method recognized by the industry (such as calculating a steel beam from measured dimensions and a known per foot weight). This information must be provided to the operator prior to the lift.

(e)(4)(ii) Articulating cranes manufactured after November 8, 2011 must have at least one of the following: automatic overload prevention device, load weighing device, load moment (or rated capacity) indicator, or load moment (rated capacity) limiter. Temporary alternative measures: The weight of the load must be determined from a source recognized by the industry (such as the load's manufacturer) or by a calculation method recognized by the industry (such as calculating a steel beam from measured dimensions and a known per foot weight). This information must be provided to the operator prior to the lift.

(e)(5) The following devices are required on equipment manufactured after November 8, 2011:

(e)(5)(i) Outrigger/stabilizer position (horizontal beam extension) sensor/ monitor if the equipment has outriggers or stabilizers. Temporary alternative measures: The operator must verify that the position of the outriggers or stabilizers is correct (in accordance with manufacturer procedures) before beginning operations requiring outrigger or stabilizer deployment.

(e)(5)(ii) Hoist drum rotation indicator if the equipment has a hoist drum not visible from the operator's station. Temporary alternative measures: Mark the drum to indicate the rotation of the drum. In addition, install mirrors or remote video cameras and displays if necessary for the operator to see the mark.