



CCAA Overhead Crane Inspection Checklist

*Items checked through operational observation only.
B003-R12/09

Hoist:

1. Hoist Duty Classification. Circle one H1, H2, H3, H4, H5, Mill Duty, Molten Metal, Nuclear or Other_____. Is hoist used beyond designed duty cycle?
2. Hoist frame and suspension. (Condition).
3. Upper tackle (Sheaves, *pins and *bearings)
4. Wire rope. (Condition).
5. Wire rope drum. (Condition).
6. Wire rope anchorage.
7. Wire fittings and end attachments.
8. Load block, *thrust bearing, sheaves, load hook and hook latch.
9. *Gearing and *bearings.
10. Hoist gear box oil level.
11. Drive shaft and couplings.
12. Hoist Load Braking System: Circle one Regenerative, Eddy Current, Dynamic Braking (DC motor), *Mechanical Load Brake, Variable Frequency Drive (VFD) or Other_____. Is system functioning as originally designed? Mechanical load brake can be tested with load while releasing holding brake to insure proper operation.
13. Hoist motor brake. (Shoe, disc, or conical) (AC or DC). Is condition and adjustment correct?
14. Hoist control panel condition.
15. Hoist wiring, magnetic controls, overloads, fusing and electrical functions. (Has OEM design been compromised?).
16. Hoist speed controls. VFD, magnetic and wound rotor motor speed resistors. (Are controls working as originally designed?)
17. Hoist upper and lower limit switches. (Gravity, geared, paddle, rope guide activated, over wrap limit, plugging limit or other_____).
18. Hoist overload limits. (Weight activated or slip clutch) (Test with load).
19. Hoist motors. (AC squirrel cage, wound rotor, DC motor). (Brushes, brush holders, slip rings, *rotor and *bearings).

Bridge:

1. Bridge Duty Classification. Circle one Class A1, A2, B, C, D, E, F, Mill Duty, Molten Metal, Nuclear or Other_____. Is bridge used beyond designed duty cycle?
2. Bridge end trucks. (Welds, bolts, connections, and sweep plates).
3. Bridge girders. (Condition) Cracks, welds etc.
4. Bridge girder to end truck using proper fasteners.
5. Bridge capacity signs.
6. Bridge wheels. (Treads, flanges, alignment and condition).

7. Bridge wheel gears and pinions. (Condition).
8. *Bridge axles and *bearings.
9. Bridge line shaft, couplings, *bearings and alignment.
10. Bridge reducer *bearings and *gears)
11. Bridge reducer oil level.
12. Bridge brake. (Shoe, disc, or conical) (AC, DC or hydraulic). Is condition and adjustment correct?
13. Bridge control panel condition.
14. Bridge wiring, magnetic controls, lockable disconnect, overloads, fusing and electrical functions. (Are controls working as originally designed?
15. Bridge speed control. (Ballast resistors, electronic soft-start, fluid coupling, wound rotor motor speed resistors or VFD). (Has OEM design been compromised?).
16. Bridge motors. (AC squirrel cage, wound rotor, DC motor). (Brushes slip rings, brush holders, *rotor and *bearings).
17. Bridge travel limits or anti-collision.
18. Bridge end stops. (Condition).
19. Bridge shock absorbing bumpers. (Condition).

Trolley:

1. Trolley frame (Welds, bolts, connections, and sweep plates).
2. Trolley rails or running surface. (Condition).
3. Trolley wheels. (Treads, flanges, alignment and condition).
4. Trolley wheel gears and pinions. (Condition).
5. *Trolley axles and *bearings.
6. Trolley line shaft, couplings *bearings and alignment.
7. Trolley reducer (*Bearings and *gears).
8. Trolley reducer oil level.
9. Trolley brake. (Shoe, disc, or conical) (AC, DC or hydraulic). Is condition and adjustment correct?
10. Trolley control panel condition.
11. Trolley wiring, magnetic controls, disconnect, overloads, fusing and electrical functions. (Are controls working as originally designed?
12. Trolley speed control. (Ballast resistors, electronic soft-start, fluid coupling, wound rotor motor speed resistors or VFD). (Has OEM design been compromised?).
13. Trolley motors. (AC squirrel cage, wound rotor, DC motor). (Brushes, slip rings, *rotor and *bearings).
14. Trolley travel limits or anti-collision.
15. Trolley end stops. (Condition).
16. Trolley shock absorbing bumpers. (Condition).

Cab & Catwalks:

1. Clearance cab (7' above the working floor).
2. Is cab located to afford a minimum of 3" from all fixed objects?
3. Access to cab or catwalk (No gap exceeding 12").
4. Do walkways have a minimum of 48" headroom, toe boards a minimum of 4" high and hand rails at 42" high?
5. Does cab operated cranes have a fire extinguisher of at least 10 BC?
6. Are runway conductors guarded to prevent contact when entering or leaving cab?
7. Does cab operated crane have a warning device?
8. Foot operated brakes shall not exceed 70 lbs of force when depressed.
9. Cab disconnect switch.
10. **Note on cab controls:** Cabs that are not equipped with spring return controllers, spring return master switches, or momentary contact push buttons, shall be provided with a device that will disconnect all motors from the line in the event of power failure. This disconnect device shall not permit any motor to

be restarted until the controller or master switch handle is brought to the off position, or a reset switch or power on-button is operated.

General Electrical:

1. Pendant (Directional labels, functions and condition).
2. Radio (Directional compass, functions and condition).
3. Radio operated crane warning device. (Visual or audible).
4. Pendant cord and strain relief. (Condition).
5. Control and power conductors. (Cross bridge electrification condition).
6. Runway conductors. (Condition).
7. Buss-Bar collector shoes and alignment. (Condition).
8. Festoon track and trolleys. (Condition).
9. Roving pendant track and trolleys. (Condition).
10. Bridge and runway conductors guarded against contact from hoisting ropes during normal operations.
11. Lockable runway disconnect switch.
12. Safety Labels (Operator warning tag, runway disconnect ID tag)
13. Operational test all functions.

General Structural / Mechanical:

1. Bridge rails or running surface. (Condition) Straight, level and in span.
2. Clearances bridge and hoist (3" overhead, 2" side)
3. Runway to column connection using proper fasteners.
4. Bridge and trolley truck frames have means to prevent 1" of drop (Safety drop lugs)?
5. Runway stops. (Condition).
6. Runway, support columns or hangers. (Condition). Are columns plumb.
7. Runway foundation and anchors. (Condition).
8. Deterioration. (Due to rust, oxidation, chemicals etc). Explain_____.

Miscellaneous:

1. Does inspection include the requirements of any local City, State or other Government specifications?
2. Crane manufactured per CMAA or other specification. Specify_____.
3. New crane systems wired per NEC. Confirm States adopted code.
4. Engineers stamp on crane supporting structure and footings available.
5. Maintenance records available.
6. Proof testing records available.
7. Manufacturers operational and repair manuals available.
8. Does inspection follow manufacturer's specifications?
9. Does inspection include below the hook attachment?

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