

CONSTRUCTION & FIELD OPS EQUIPMENT INSPECTION TEMPLATE

Construction Equipment Inspection Checklist

Inspect equipment identity, maintenance status, structural condition, tyres or tracks, fluids, hydraulics, operator controls, brakes, steering, safety devices, attachments, defects, repairs, and return-to-service approval.

PROJECT / LOCATION

INSPECTION DATE

EQUIPMENT / ASSET ID

INSPECTOR / APPROVER

1. Inspection setup, asset identity, and equipment scope

- 1 Confirm the project, site, inspection date, shift, equipment type, asset ID, registration or serial number, owner, operator, inspector, and approver.

ASSET + SCOPE

NAME Enter

TIME ____

SIGNATURE Sign

■ **Execution tip:** Use the same asset identifier on the machine, inspection form, maintenance record, and defect action.

- 2 Define the equipment configuration, attachments, work area, intended task, operating environment, and any special hazards included in the inspection.

ASSET + SCOPE

Component	Expected	Actual	Result	Evidence

■ **Execution tip:** Record the exact attachment and operating environment because safe limits can change with configuration and conditions.

- 3 Verify the equipment is approved for the project and that its rated capacity, operating limits, and intended use match the planned construction activity.

ASSET + SCOPE

HOURS ____

READING ____

LIMIT ____

Investigate

■ **Execution tip:** Compare planned work with manufacturer limits, project rules, and any equipment-specific restrictions.

- 4 Review previous inspection findings, breakdowns, near misses, damage events, overloads, modifications, recurring defects, and overdue corrective actions.

ASSET + SCOPE

Defect	Owner	Priority	Due	Evidence

■ **Execution tip:** Repeat defects often reveal maintenance, operating, environment, or supervision problems that need more than a one-time repair.

- 5 Confirm the current manufacturer operating manual, inspection criteria, maintenance instructions, and emergency information are available to the responsible team.

ASSET + SCOPE

Compliant

Needs attention

Critical defect

N/A

■ **Execution tip:** Use the current manufacturer instructions rather than relying on memory or an old checklist.

- 6 Capture the inspection start time, geo-location, hour-meter or odometer reading where applicable, and an approved reference photo of the equipment.

ASSET + SCOPE

Serviceable

Monitor

Out of service

Create action

■ **Execution tip:** Photograph the full asset and hour-meter or odometer before detailed checks begin.

2. Documentation, maintenance status, and inspection records

- 7 Verify scheduled preventive maintenance, servicing, lubrication, statutory examination, and manufacturer inspection requirements are current for the equipment.

MAINTENANCE + RECORDS

Component	Expected	Actual	Result	Evidence

■ **Execution tip:** Confirm the maintenance due point by date, hours, mileage, cycles, or other manufacturer interval.

- 8 Confirm previous pre-use, shift, weekly, monthly, or periodic inspection records are complete and any open defects are clearly identified and controlled.

MAINTENANCE + RECORDS

HOURS	READING	LIMIT	Investigate
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■ **Execution tip:** Do not accept a signed pre-use record if the listed defects are still open or cannot be verified.

- 9 Check required certificates, permits, registrations, load charts, inspection tags, test records, and other equipment-specific documents are valid and traceable.

MAINTENANCE + RECORDS

Defect	Owner	Priority	Due	Evidence

■ **Execution tip:** Match the certificate or inspection tag to the exact asset, attachment, serial number, and validity period.

- 10 Verify repairs, adjustments, modifications, replacement safety devices, and structural work have been inspected and approved before return to service where required.

MAINTENANCE + RECORDS

Compliant Needs attention Critical defect N/A

■ **Execution tip:** Check who approved the repair or modification and whether post-repair inspection or testing was required.

- 11 Confirm maintenance history identifies recurring failures, overdue parts, temporary repairs, abnormal wear, or conditions requiring increased monitoring.

MAINTENANCE + RECORDS

Serviceable Monitor Out of service Create action

■ **Execution tip:** Use recurring failures to increase inspection frequency or plan permanent corrective maintenance.

- 12 Verify equipment that has been idle, transferred, reassembled, severely loaded, damaged, or otherwise exposed to abnormal conditions receives any required additional inspection before use.

MAINTENANCE + RECORDS

Current Due soon Missing / overdue Attach record

■ **Execution tip:** Equipment returning after storage, severe service, damage, or modification may need more than a routine pre-use check.

3. Walkaround condition, structure, access, and guarding

- 13** Inspect the frame, chassis, body, boom, arms, cab, counterweight, welds, pins, fasteners, mounts, and structural members for cracks, deformation, corrosion, looseness, or damage.

STRUCTURE + GUARDING

HOURS

READING

LIMIT

Investigate

■ **Execution tip:** Look closely at high-stress joints, welds, pivots, mounts, boom or arm connections, and previously repaired areas.

- 14** Check steps, ladders, handholds, platforms, access doors, walkways, anti-slip surfaces, and operator entry points are secure, clean, and safe to use.

CRITICAL

STRUCTURE + GUARDING

Defect	Owner	Priority	Due	Evidence

■ **Execution tip:** Clean mud, oil, or debris from access points before accepting the equipment as safe to board.

- 15** Verify guards, shields, covers, engine panels, fan guards, pinch-point protection, and other protective devices are fitted, secure, and not bypassed or damaged.

CRITICAL

STRUCTURE + GUARDING

Compliant

Needs attention

Critical defect

N/A

■ **Execution tip:** Never treat a missing guard as a housekeeping issue; restrict the equipment if exposure to moving parts exists.

- 16** Inspect mirrors, windows, windscreen, wipers, camera systems, and visibility aids for condition, cleanliness, adjustment, and an unobstructed operator view.

STRUCTURE + GUARDING

Serviceable

Monitor

Out of service

Create action

■ **Execution tip:** Check the operator view from the actual seated position, not only from outside the cab.

- 17** Check leaks, loose materials, debris, sharp edges, unsecured tools, damaged panels, and other visible conditions that could create injury, fire, or equipment failure risk.

CRITICAL

STRUCTURE + GUARDING

Current

Due soon

Missing / overdue

Attach record

■ **Execution tip:** Remove loose tools or materials that could fall, jam controls, contact hot surfaces, or become projectiles.

- 18** Confirm warning labels, capacity markings, safety decals, operating instructions, and equipment identification remain present and readable.

CRITICAL

STRUCTURE + GUARDING

Component	Expected	Actual	Result	Evidence

■ **Execution tip:** Replace unreadable warnings where the label communicates a control, capacity, pinch point, or prohibited use.

4. Tyres, tracks, wheels, undercarriage, and stability components

- 19 Inspect tyres for inflation, cuts, bulges, exposed cords, embedded objects, abnormal wear, sidewall damage, and other defects that could affect safe operation.

TYRES / TRACKS + STABILITY

Defect	Owner	Priority	Due	Evidence

■ **Execution tip:** Check tyre condition when loaded or turned if that is where sidewall damage or abnormal wear is easiest to see.

- 20 Check wheel rims, studs, nuts, hubs, axles, and wheel assemblies for damage, looseness, missing components, leakage, or signs of overheating.

CRITICAL

TYRES / TRACKS + STABILITY

Compliant Needs attention Critical defect N/A

■ **Execution tip:** Missing or loose wheel hardware can become a high-consequence failure; escalate immediately.

- 21 For tracked equipment, inspect tracks, rollers, sprockets, idlers, tension, shoes, pins, guards, and undercarriage components for damage, wear, or abnormal alignment.

CRITICAL

TYRES / TRACKS + STABILITY

Serviceable Monitor Out of service Create action

■ **Execution tip:** Inspect the full undercarriage, not only the visible outer track surface.

- 22 Verify outriggers, stabilizers, jacks, locking devices, pads, floats, and supporting components are complete, serviceable, and suitable for the planned setup where fitted.

TYRES / TRACKS + STABILITY

Current Due soon Missing / overdue Attach record

■ **Execution tip:** Confirm stabilizer pads and supporting ground can carry the load without settlement or slip.

- 23 Confirm ground-contact components and support points are free from contamination or damage that could reduce traction, stability, braking, or safe positioning.

CRITICAL

TYRES / TRACKS + STABILITY

Component	Expected	Actual	Result	Evidence

■ **Execution tip:** Contamination such as mud, oil, concrete slurry, or ice can materially reduce traction and stability.

- 24 Check the equipment is parked or positioned on stable ground and that chocks, stabilizers, parking controls, or other movement-prevention measures are available where required.

CRITICAL

TYRES / TRACKS + STABILITY

HOURS _____ READING _____ LIMIT _____ Investigate

■ **Execution tip:** Use chocks or other movement controls when site slope or maintenance activity makes parking brakes alone insufficient.

5. Engine, fluids, hydraulics, fuel, battery, and energy systems

- 25 Check engine oil, coolant, hydraulic fluid, transmission fluid, brake fluid, fuel, and other required levels against manufacturer limits before operation.

FLUID + HYDRAULIC SYSTEM

Compliant

Needs attention

Critical defect

N/A

■ **Execution tip:** Check levels on level ground and using the manufacturer method to avoid false readings.

- 26 Inspect hoses, pipes, cylinders, fittings, reservoirs, filters, pumps, valves, seals, and connections for leaks, abrasion, bulging, damage, or insecure routing.

CRITICAL

FLUID + HYDRAULIC SYSTEM

Serviceable

Monitor

Out of service

Create action

■ **Execution tip:** Do not use hands to search for hydraulic leaks; use an approved safe inspection method.

- 27 Verify hydraulic cylinders, rods, pins, retaining devices, and moving joints show no abnormal leakage, scoring, bending, looseness, or uncontrolled drift.

CRITICAL

FLUID + HYDRAULIC SYSTEM

Current

Due soon

Missing / overdue

Attach record

■ **Execution tip:** Unexpected cylinder drift may indicate internal leakage or control-system problems even when no external leak is visible.

- 28 Inspect batteries, terminals, cables, isolation switches, charging components, electrical enclosures, and wiring for secure connections, damage, corrosion, or exposed conductors.

FLUID + HYDRAULIC SYSTEM

Component	Expected	Actual	Result	Evidence

■ **Execution tip:** Inspect cable routing near hinges, hot surfaces, sharp edges, and vibration points where damage often develops.

- 29 Check fuel tanks, caps, lines, LPG cylinders, charging systems, and refueling or charging connections for condition, leakage, fire risk, and secure mounting as applicable.

CRITICAL

FLUID + HYDRAULIC SYSTEM

HOURS

READING

LIMIT

Investigate

■ **Execution tip:** Keep ignition sources away from fuel or charging areas and verify ventilation requirements for the energy source.

- 30 Confirm abnormal fluid loss, overheating, smoke, odor, pressure warning, battery fault, or other energy-system defect is assessed before the equipment is placed in service.

CRITICAL

FLUID + HYDRAULIC SYSTEM

Defect	Owner	Priority	Due	Evidence

■ **Execution tip:** Stop and investigate any warning that indicates loss of lubrication, cooling, pressure, charging, or other critical function.

6. Operator station, controls, brakes, steering, and visibility

- 31 Verify the operator seat, seat belt, restraint, adjustment, and mounting are present, serviceable, and appropriate for the equipment.

CRITICAL

CONTROLS + BRAKES

Serviceable

Monitor

Out of service

Create action

■ **Execution tip:** Confirm the restraint is not only present but latches, retracts, adjusts, and anchors correctly.

- 32 Test service brakes, parking brakes, emergency stopping systems, steering, directional controls, pedals, levers, and other primary operating controls for correct response.

CRITICAL

CONTROLS + BRAKES

Current

Due soon

Missing / overdue

Attach record

■ **Execution tip:** Perform brake and steering tests in a controlled area before entering normal traffic or work zones.

- 33 Confirm controls return to neutral or safe position as designed and that interlocks, lockouts, dead-man controls, or enabling devices function correctly where fitted.

CRITICAL

CONTROLS + BRAKES

Component	Expected	Actual	Result	Evidence

■ **Execution tip:** Test interlocks without bypassing them and confirm the equipment fails safe where intended.

- 34 Check gauges, indicators, hour meter, warning lights, fault codes, display screens, and monitoring systems initialize and operate without unresolved critical warnings.

CRITICAL

CONTROLS + BRAKES

HOURS

READING

LIMIT

Investigate

■ **Execution tip:** Record critical fault codes before they are cleared so maintenance can diagnose the actual condition.

- 35 Verify mirrors, cameras, proximity aids, windscreen, lighting, cab cleanliness, and operator sight lines provide adequate visibility for the planned work.

CRITICAL

CONTROLS + BRAKES

Defect	Owner	Priority	Due	Evidence

■ **Execution tip:** Visibility aids supplement - not replace - a safe travel plan, separation, and signaling where required.

- 36 Confirm the operator can safely enter, start, control, stop, park, isolate, and exit the equipment using the intended operating sequence.

CRITICAL

CONTROLS + BRAKES

Compliant

Needs attention

Critical defect

N/A

■ **Execution tip:** An operator should be able to demonstrate safe shutdown and isolation, not just normal driving controls.

7. Safety devices, alarms, lighting, and protective systems

- 37 Test the horn, reverse alarm, travel alarm, beacon, indicators, headlights, work lights, brake lights, reflectors, and other required warning systems for operation and visibility.

CRITICAL

SAFETY DEVICES

Current

Due soon

Missing / overdue

Attach record

■ **Execution tip:** Test alarms where normal site noise is present to confirm they can actually serve their warning purpose.

- 38 Verify emergency stops, shutdown devices, interlocks, overload protection, limit devices, anti-restart controls, and other fitted safety systems function as intended.

CRITICAL

SAFETY DEVICES

Component	Expected	Actual	Result	Evidence

■ **Execution tip:** Follow manufacturer or regulatory rules for safety-device testing; do not create a new hazard while testing.

- 39 Inspect ROPS, FOPS, cab protection, guards, screens, fire extinguisher, fire suppression, and falling-object protection where required for the equipment and work environment.

CRITICAL

SAFETY DEVICES

HOURS

READING

LIMIT

Investigate

■ **Execution tip:** Inspect protective structures for unauthorized drilling, welding, deformation, or repairs that could affect integrity.

- 40 Confirm seat belts, restraint systems, access interlocks, operator-presence controls, and other protective devices have not been removed, bypassed, tied back, or defeated.

CRITICAL

SAFETY DEVICES

Defect	Owner	Priority	Due	Evidence

■ **Execution tip:** Any defeated restraint or interlock should be treated as intentional removal of a critical control until corrected.

- 41 Check audible and visual warnings are distinguishable in the actual work environment and that any required spotter or signaling arrangement is available for restricted visibility.

CRITICAL

SAFETY DEVICES

Compliant

Needs attention

Critical defect

N/A

■ **Execution tip:** Use a trained spotter when visibility or site geometry prevents the operator from maintaining a safe view.

- 42 Verify any failed safety device or critical operational aid triggers the required restriction, repair, alternative measure, or removal from service before operation.

CRITICAL

SAFETY DEVICES

Serviceable

Monitor

Out of service

Create action

■ **Execution tip:** Document the exact failed safety device and the condition required before use can resume.

8. Attachments, couplers, forks, buckets, lifting points, and rated capacity

- 43 Inspect buckets, blades, forks, grabs, hammers, augers, booms, jibs, hooks, lifting points, quick couplers, and other attachments for cracks, distortion, wear, damage, or missing components.

ATTACHMENT + CAPACITY

Component	Expected	Actual	Result	Evidence

■ **Execution tip:** Focus on wear surfaces, attachment ears, welds, cutting edges, pins, hooks, and points that carry dynamic load.

- 44 Verify attachment pins, locking mechanisms, retainers, couplers, hoses, electrical connections, and secondary safety devices are correctly engaged and secure.

CRITICAL

ATTACHMENT + CAPACITY

HOURS	READING	LIMIT	Investigate

■ **Execution tip:** After coupling, perform the manufacturer verification step and visually confirm full engagement.

- 45 Confirm the installed attachment is approved or suitable for the equipment and does not exceed the applicable rated capacity, stability, or operating limits.

CRITICAL

ATTACHMENT + CAPACITY

Defect	Owner	Priority	Due	Evidence

■ **Execution tip:** Recalculate or verify capacity whenever attachment, boom position, load center, ground condition, or configuration changes.

- 46 Check load charts, rated capacity markings, fork ratings, hook or lifting-point identification, and other capacity information are readable and appropriate to the configuration.

ATTACHMENT + CAPACITY

Compliant Needs attention Critical defect N/A

■ **Execution tip:** Do not rely on a capacity label for a different attachment or machine configuration.

- 47 Verify lifting accessories, slings, shackles, hooks, chains, or rigging used with the equipment have current identification and inspection status where applicable.

CRITICAL

ATTACHMENT + CAPACITY

Serviceable Monitor Out of service Create action

■ **Execution tip:** Match rigging identification to the lift plan or equipment task before use.

- 48 Confirm attachments are lowered, blocked, isolated, or otherwise secured against unintended movement before inspection, maintenance, repair, or worker access beneath raised components.

CRITICAL

ATTACHMENT + CAPACITY

Current Due soon Missing / overdue Attach record

■ **Execution tip:** Use approved blocking or mechanical restraint before anyone works beneath a raised bucket, body, boom, or attachment.

9. Operational test, work-zone controls, parking, and defect isolation

- 49** Perform an approved low-risk functional test and verify start-up, idle, travel, steering, braking, hydraulics, attachment movement, shutdown, and other relevant functions operate normally.

CRITICAL

FUNCTION TEST + DEFECT

HOURS

READING

LIMIT

Investigate

■ **Execution tip:** Keep the initial functional test away from pedestrians, edges, overhead hazards, and live production areas.

- 50** Observe for unusual noise, vibration, smoke, drift, delayed response, overheating, warning codes, fluid loss, or other signs of developing mechanical or control failure.

CRITICAL

FUNCTION TEST + DEFECT

Defect	Owner	Priority	Due	Evidence

■ **Execution tip:** Investigate changes from the equipment's normal sound, feel, speed, response, temperature, or pressure behavior.

- 51** Confirm the travel route, exclusion zone, overhead clearance, underground hazards, ground conditions, slopes, edges, pedestrian interfaces, and reversing controls are suitable for equipment movement.

CRITICAL

FUNCTION TEST + DEFECT

Compliant

Needs attention

Critical defect

N/A

■ **Execution tip:** Walk the planned route before movement when overhead, underground, slope, edge, or pedestrian risks are uncertain.

- 52** Verify parking, lowering of attachments, neutral controls, brake application, engine shutdown, key control, isolation, and wheel chocking are completed as required when equipment is unattended or serviced.

CRITICAL

FUNCTION TEST + DEFECT

Serviceable

Monitor

Out of service

Create action

■ **Execution tip:** Lower attachments and neutralize stored energy before leaving the operator station unless an approved procedure says otherwise.

- 53** Confirm every defect is classified by severity and that any condition affecting safe operation is tagged, isolated, reported, and prevented from use until corrected.

CRITICAL

FUNCTION TEST + DEFECT

Current

Due soon

Missing / overdue

Attach record

■ **Execution tip:** If the defect could cause failure while in use, the machine should not be released merely because the task is urgent.

- 54** Verify defect details include asset ID, exact location, symptom, photo or evidence, operator or inspector, date and time, immediate control, repair owner, and required verification.

CRITICAL

FUNCTION TEST + DEFECT

Component	Expected	Actual	Result	Evidence

■ **Execution tip:** Use photos and precise defect location so maintenance can find the problem without guessing.

10. Findings, repair verification, return to service, and sign-off

- 55** Calculate the overall equipment inspection result and summarize critical defects, recurring issues, overdue maintenance, and restrictions affecting the asset.

CRITICAL

REPAIR + RELEASE

Defect	Owner	Priority	Due	Evidence

■ **Execution tip:** Separate immediate operational risk from longer-term reliability trends in the final summary.

- 56** Create immediate containment for any brake, steering, structural, hydraulic, tyre or track, safety-device, visibility, attachment, electrical, fire, or other serious defect.

CRITICAL

REPAIR + RELEASE

Compliant Needs attention Critical defect N/A

■ **Execution tip:** Contain the hazard first - stop use, lower attachments, isolate energy, barricade, or move to a safe location as appropriate.

- 57** Assign each defect an owner, priority, due date, repair requirement, parts or specialist support, and closure-evidence requirement.

CRITICAL

REPAIR + RELEASE

Serviceable Monitor Out of service Create action

■ **Execution tip:** Use short deadlines for safety-critical defects and realistic planned dates for noncritical preventive work.

- 58** Verify repairs or adjustments affecting safe operation are inspected and function-tested before the equipment is returned to normal service.

CRITICAL

REPAIR + RELEASE

Current Due soon Missing / overdue Attach record

■ **Execution tip:** Verify both the repair and the affected safety function; a replaced part alone is not proof of safe operation.

- 59** Confirm restricted equipment remains clearly identified and unavailable for use until all release conditions, inspections, and approvals have been completed.

CRITICAL

REPAIR + RELEASE

Component	Expected	Actual	Result	Evidence

■ **Execution tip:** Keep keys, tags, digital status, and physical isolation aligned so restricted equipment cannot be used accidentally.

- 60** Record the final inspection decision, return-to-service status, remaining restrictions, next inspection or service due date, inspector, operator or supervisor acknowledgment, approver, date, time, and signature.

CRITICAL

REPAIR + RELEASE

NAME Enter TIME SIGNATURE Sign

■ **Execution tip:** Final sign-off should clearly state whether the equipment is released, conditionally released, or out of service.

RUN THIS CHECKLIST DIGITALLY

Turn every equipment defect into accountable restriction and verified return to service

Use Taotics to schedule inspections by asset and shift, capture live machine evidence, restrict unsafe equipment, assign repair actions, verify functional testing, approve return to service, and compare recurring equipment risk across projects.

Asset inspections

Live defect evidence

Equipment restrictions

Repair actions

Functional testing

Equipment dashboards

Try the Construction Equipment Inspection Checklist in Taotics