

CONSTRUCTION & FIELD OPS EXCAVATOR INSPECTION TEMPLATE

Excavator Inspection Checklist

Inspect undercarriage, hydraulics, boom, stick, bucket, quick coupler, travel, swing, alarms, visibility, work-zone conditions, defects, repairs, and return-to-service readiness.

PROJECT / LOCATION

DATE / SHIFT

EXCAVATOR / ASSET ID

OPERATOR / INSPECTOR

1. Inspection setup, excavator identity, operator, and work scope

- 1 Confirm the project, work area, inspection date and shift, excavator make, model, asset or serial number, operating hours, owner, operator, inspector, and approver.

EXCAVATOR

Compliant

Needs attention

Out of service

N/A

Execution tip: Record the exact machine and attachment configuration so findings remain traceable.

- 2 Record the excavator configuration, operating weight class, undercarriage type, boom and stick arrangement, bucket or attachment type, quick coupler, counterweight, and any auxiliary hydraulic circuits.

CRITICAL

EXCAVATOR

Compliant

Needs attention

Out of service

N/A

Execution tip: Excavator inspection should include the installed coupler and attachment.

- 3 Verify the operator is trained, authorized, familiar with the specific excavator and attachment configuration, and permitted to operate it on the project.

EXCAVATOR

Compliant

Needs attention

Out of service

N/A

Execution tip: Operator authorization should match the actual excavator class and site rules.

- 4 Confirm the current operator manual, manufacturer warnings, rated lifting or attachment information, site equipment rules, and applicable inspection or maintenance criteria are available.

CRITICAL

EXCAVATOR

Compliant

Needs attention

Out of service

N/A

Execution tip: Use the current manufacturer manual and rated information.

- 5 Review previous defects, hydraulic failures, coupler concerns, boom or stick damage, track or travel issues, alarm failures, collisions, overloads, and open repair actions.

EXCAVATOR

Compliant

Needs attention

Out of service

N/A

Execution tip: Repeat coupler, hydraulic, or undercarriage defects deserve deeper investigation.

- 6 Record the excavator's starting status, parked position, attachment position, isolation condition, and any existing restriction or out-of-service tag before inspection begins.

EXCAVATOR

Compliant

Needs attention

Out of service

N/A

Execution tip: Know whether the excavator already has a restriction before starting.

2. Documentation, maintenance status, modifications, and service history

7

Verify required pre-use, shift, periodic, maintenance, repair, and statutory inspection records are current and traceable to the exact excavator.

EXCAVATOR

Compliant

Needs attention

Out of service

N/A

Execution tip: Use serial or asset number on every maintenance and inspection record.

8

Confirm scheduled engine, hydraulic, undercarriage, slew, attachment, and safety-system maintenance is not overdue.

CRITICAL

EXCAVATOR

Compliant

Needs attention

Out of service

N/A

Execution tip: Track undercarriage and hydraulic service as well as engine service.

9

Check structural repairs, welding, boom or stick replacement, counterweight changes, auxiliary hydraulic modifications, coupler changes, or other alterations have been properly approved and documented.

EXCAVATOR

Compliant

Needs attention

Out of service

N/A

Execution tip: Structural or attachment-system modifications may need formal approval.

10

Verify capacity information, warning decals, lifting information where applicable, identification plates, and manufacturer labels remain legible and match the current machine configuration.

CRITICAL

EXCAVATOR

Compliant

Needs attention

Out of service

N/A

Execution tip: Capacity information must match the current machine and attachment.

11

Confirm safety-critical repairs have been followed by the required functional testing, inspection, or maintenance verification before the excavator is released.

EXCAVATOR

Compliant

Needs attention

Out of service

N/A

Execution tip: Safety-critical repairs should be function-tested before return to use.

12

Prevent excavator release where required maintenance records, inspection history, capacity information, or modification approval is missing or unreliable.

EXCAVATOR

Compliant

Needs attention

Out of service

N/A

Execution tip: Do not release the excavator on undocumented assumptions.

3. Cab, ROPS/FOPS, access, seat belt, visibility, and guarding

- 13** Inspect the cab, ROPS or FOPS where provided, mounting points, doors, roof, windows, safety glass, mirrors, steps, ladders, handholds, and access surfaces for secure condition. **CRITICAL** EXCAVATOR
- Compliant Needs attention Out of service N/A

Execution tip: Inspect access and cab protection as safety-critical systems.

- 14** Verify the operator seat, seat adjustment, seat belt or restraint, buckle, webbing, anchorage, and associated warning devices are serviceable and used as required. **CRITICAL** EXCAVATOR
- Compliant Needs attention Out of service N/A

Execution tip: OSHA earthmoving requirements include seat belts on covered equipment.

- 15** Check windscreen, windows, mirrors, cameras, wipers, washers, and other visibility aids for cleanliness, damage, distortion, and usable field of view. **CRITICAL** EXCAVATOR
- Compliant Needs attention Out of service N/A

Execution tip: Clean glass and cameras before deciding whether visibility is adequate.

- 16** Inspect engine covers, fan guards, hot-surface protection, hydraulic guards, slew-area guarding, battery covers, and other shields for secure installation. **CRITICAL** EXCAVATOR
- Compliant Needs attention Out of service N/A

Execution tip: Guarding should protect operators and maintainers from moving and hot parts.

- 17** Confirm cab housekeeping is good and loose tools, bottles, materials, or debris cannot interfere with pedals, joysticks, emergency exits, or operator movement. **CRITICAL** EXCAVATOR
- Compliant Needs attention Out of service N/A

Execution tip: Loose cab items can interfere with controls during sudden movement.

- 18** Remove the excavator from service when cab damage, compromised rollover or falling-object protection, failed restraints, unsafe access, missing guards, or visibility defects create serious risk. EXCAVATOR
- Compliant Needs attention Out of service N/A

Execution tip: Serious cab, restraint, or visibility defects require restriction.

4. Undercarriage, tracks, rollers, idlers, sprockets, travel, and stability

- 19 Inspect track shoes, track links, pins, bushes, bolts, rollers, carrier rollers, idlers, sprockets, guards, and visible undercarriage structure for cracks, abnormal wear, missing parts, or damage.

CRITICAL

EXCAVATOR

Compliant

Needs attention

Out of service

N/A

Execution tip: Undercarriage condition directly affects travel stability and reliability.

- 20 Check track tension and sag against the manufacturer method and look for uneven tension, packed material, seized rollers, or conditions that may affect travel or derailment risk.

CRITICAL

EXCAVATOR

Compliant

Needs attention

Out of service

N/A

Execution tip: Use the manufacturer track-tension method.

- 21 Inspect final drives, travel motors, drive housings, seals, and visible connections for leakage, damage, overheating, or abnormal condition.

CRITICAL

EXCAVATOR

Compliant

Needs attention

Out of service

N/A

Execution tip: Final-drive leaks can rapidly become serious travel defects.

- 22 Verify the slew ring area, center joint, upper-structure mounting, counterweight, and visible machine balance components show no obvious looseness, damage, or interference.

CRITICAL

EXCAVATOR

Compliant

Needs attention

Out of service

N/A

Execution tip: Check the slew area for abnormal movement and visible damage.

- 23 Check blade, dozer attachment, outriggers, stabilizers, or other fitted stability components for damage, secure pins, hydraulic condition, and correct operation.

CRITICAL

EXCAVATOR

Compliant

Needs attention

Out of service

N/A

Execution tip: Blade and outrigger condition affects machine positioning and stability.

- 24 Restrict operation when undercarriage, final-drive, slew, counterweight, blade, outrigger, or stability defects could affect safe travel, rotation, digging, lifting, or positioning.

EXCAVATOR

Compliant

Needs attention

Out of service

N/A

Execution tip: Do not operate when stability or travel components are unreliable.

5. Engine, fuel, cooling, batteries, fluids, hydraulics, and leak condition

- 25 Check engine oil, coolant, fuel, hydraulic oil, swing or final-drive oils where applicable, and other required fluid levels using the manufacturer procedure. CRITICAL EXCAVATOR
- Compliant Needs attention Out of service N/A

Execution tip: Check fluid levels using the manufacturer temperature and position requirements.

- 26 Inspect the excavator and ground beneath it for fresh fuel, engine oil, coolant, hydraulic oil, grease, or other leaks before startup. CRITICAL EXCAVATOR
- Compliant Needs attention Out of service N/A

Execution tip: Look under the excavator before starting for fresh leaks.

- 27 Check hydraulic pumps, valves, hoses, tubes, fittings, accumulators, cylinders, rods, seals, auxiliary circuits, and hose routing for chafing, bulging, cracks, damage, or active leakage. CRITICAL EXCAVATOR
- Compliant Needs attention Out of service N/A

Execution tip: Never use hands to locate a high-pressure hydraulic leak.

- 28 Inspect radiator and cooling package, fan area, air intake, filters, exhaust, after-treatment components, and engine compartment for damage, debris buildup, overheating indicators, or fire risk. CRITICAL EXCAVATOR
- Compliant Needs attention Out of service N/A

Execution tip: Cooling-system debris can contribute to overheating and fire risk.

- 29 Check battery mounting, terminals, cables, isolator, charging connections, starter wiring, and visible harnesses for corrosion, damage, overheating, or insecure routing. CRITICAL EXCAVATOR
- Compliant Needs attention Out of service N/A

Execution tip: Battery and cable damage can create ignition or starting hazards.

- 30 Take the excavator out of service for fuel leaks, high-pressure hydraulic defects, damaged cylinders or hoses, severe overheating, electrical hazards, or other uncontrolled energy-release conditions. EXCAVATOR
- Compliant Needs attention Out of service N/A

Execution tip: Fuel and high-pressure hydraulic failures are strong stop-use triggers.

6. Boom, stick, bucket, pins, quick coupler, attachments, and lifting points

- 31 Inspect the boom, stick, bucket, linkage, ears, bosses, welds, pins, bushes, retainers, and attachment structures for cracks, deformation, excessive play, missing hardware, or abnormal wear. CRITICAL EXCAVATOR
- Compliant Needs attention Out of service N/A

Execution tip: Excavator coupler failures can allow buckets to detach without warning.

- 32 Verify bucket or attachment pins, retaining devices, quick-coupler locks, safety pins, mechanical or hydraulic locking systems, and visual or electronic indicators are fully engaged. CRITICAL EXCAVATOR
- Compliant Needs attention Out of service N/A

Execution tip: OSHA has specifically warned about inadequately secured hydraulic excavator buckets using quick couplers.

- 33 After changing a bucket or attachment, physically verify secure engagement using the manufacturer-approved check before personnel enter the attachment drop zone. CRITICAL EXCAVATOR
- Compliant Needs attention Out of service N/A

Execution tip: Physically verify the locking system after every attachment change.

- 34 Inspect auxiliary hydraulic hoses, quick-connects, electrical connectors, tool retainers, breaker lines, rotation circuits, and attachment routing for secure connection and protection from damage. CRITICAL EXCAVATOR
- Compliant Needs attention Out of service N/A

Execution tip: Keep hoses protected from pinch points through the full attachment range.

- 35 Confirm the bucket, breaker, grapple, compactor, lifting accessory, tiltrotator, or other attachment is approved for the excavator and within machine and coupler limitations. CRITICAL EXCAVATOR
- Compliant Needs attention Out of service N/A

Execution tip: An attachment that physically fits may still exceed machine or coupler limits.

- 36 Stop operation when a coupler, pin, retainer, bucket, attachment, lifting point, or locking system cannot be verified as fully secure and suitable for the intended task. EXCAVATOR
- Compliant Needs attention Out of service N/A

Execution tip: Never permit people beneath or in front of an attachment that is not positively verified.

7. Travel controls, brakes, swing, joysticks, lockouts, and instrumentation

- 37 Test travel pedals or levers, direction controls, steering response, service braking or hydrostatic stopping, parking or holding functions, and travel speed selection for predictable operation. **CRITICAL** EXCAVATOR
- Compliant Needs attention Out of service N/A

Execution tip: Test travel and swing in a controlled area before productive work.

- 38 Verify swing controls, slew brake or holding function, boom and stick controls, bucket controls, auxiliary hydraulics, blade controls, and joysticks operate smoothly without sticking or unintended movement. **CRITICAL** EXCAVATOR
- Compliant Needs attention Out of service N/A

Execution tip: Unintended drift or creep can indicate control or hydraulic defects.

- 39 Check hydraulic lockout or safety lever, pilot-control isolation, neutral-start or start interlocks, travel locks, emergency stop features, and other installed safety interlocks. **CRITICAL** EXCAVATOR
- Compliant Needs attention Out of service N/A

Execution tip: Safety lockout levers and interlocks should be tested, not assumed.

- 40 Inspect gauges, display, hour meter, warning lights, fault codes, hydraulic pressure or temperature indicators, fuel, engine temperature, and other status information for normal operation. **CRITICAL** EXCAVATOR
- Compliant Needs attention Out of service N/A

Execution tip: Do not ignore persistent fault codes or warning indicators.

- 41 Observe for excessive control drift, cylinder creep, unintended swing, delayed response, unusual vibration, or abnormal movement with controls in neutral. **CRITICAL** EXCAVATOR
- Compliant Needs attention Out of service N/A

Execution tip: Uncommanded movement requires immediate investigation.

- 42 Do not place the excavator in service when travel, braking, swing, controls, interlocks, or safety-critical instrumentation are defective or unreliable. EXCAVATOR
- Compliant Needs attention Out of service N/A

Execution tip: Critical travel, swing, or control defects must be corrected before service.

8. Horn, reverse alarm, lights, cameras, fire protection, and warning systems

43

Verify the horn is operational, distinguishable from surrounding noise, and available for use whenever the excavator is moving.

CRITICAL

EXCAVATOR

Compliant

Needs attention

Out of service

N/A

Execution tip: OSHA requires an operable horn on covered bidirectional earthmoving equipment.

44

Where rear visibility is obstructed, verify the reverse alarm operates and is distinguishable from surrounding noise or confirm an approved signal-person arrangement is in use.

CRITICAL

EXCAVATOR

Compliant

Needs attention

Out of service

N/A

Execution tip: Obstructed rear visibility requires a reverse alarm or signal person under OSHA 1926.602.

45

Inspect work lights, travel lights, beacons, reflectors, indicators, and other required lighting for damage, alignment, cleanliness, and visibility.

CRITICAL

EXCAVATOR

Compliant

Needs attention

Out of service

N/A

Execution tip: Lighting should match the work schedule and visibility conditions.

46

Verify rear-view and side cameras, mirrors, object-detection systems, proximity sensors, or other installed visibility aids are clean, powered, aligned, and functioning.

CRITICAL

EXCAVATOR

Compliant

Needs attention

Out of service

N/A

Execution tip: Clean cameras and sensors before testing their function.

47

Check fire extinguisher, fire-suppression system where fitted, emergency egress, emergency lowering or shutdown arrangements, and safety labels as applicable.

CRITICAL

EXCAVATOR

Compliant

Needs attention

Out of service

N/A

Execution tip: Fire and emergency equipment are part of daily excavator readiness.

48

Restrict operation when required warning devices, visibility aids, lighting, fire protection, or emergency systems are missing or defective and the hazard cannot be otherwise controlled.

EXCAVATOR

Compliant

Needs attention

Out of service

N/A

Execution tip: Do not replace missing safety devices with operator caution alone.

9. Functional test, swing radius, excavation edge, utilities, power lines, and work zone

49

Conduct a controlled functional test to verify engine response, travel, swing, boom, stick, bucket, attachment, braking or holding, alarms, lockouts, and stopping behavior before productive work.

CRITICAL

EXCAVATOR

Compliant

Needs attention

Out of service

N/A

Execution tip: Complete the functional test away from pedestrians and live work.

50

Observe for abnormal noise, vibration, smoke, warning codes, overheating, hydraulic drift, control lag, track movement, slew irregularity, or unexpected machine behavior during the test.

CRITICAL

EXCAVATOR

Compliant

Needs attention

Out of service

N/A

Execution tip: Abnormal sound, drift, vibration, or heat can reveal developing defects.

51

Verify the excavator can operate from stable ground with suitable bearing capacity and safe distance from excavation edges, slopes, trenches, voids, soft ground, or unsupported surfaces.

CRITICAL

EXCAVATOR

Compliant

Needs attention

Out of service

N/A

Execution tip: Keep excavators back from unstable trench or excavation edges.

52

Confirm the swing radius, counterweight area, travel path, loading area, and attachment movement zone are controlled against pedestrian entry and conflicting plant movement.

CRITICAL

EXCAVATOR

Compliant

Needs attention

Out of service

N/A

Execution tip: Control the full counterweight and attachment swing radius.

53

Identify underground services, overhead power lines, structures, temporary works, traffic, lifting operations, and simultaneous work that may affect safe excavator operation.

CRITICAL

EXCAVATOR

Compliant

Needs attention

Out of service

N/A

Execution tip: OSHA 1926.600 contains minimum clearance rules for equipment near energized power lines.

54

Stop operation when ground conditions, excavation-edge stability, utility exposure, power-line proximity, pedestrian access, or surrounding work creates uncontrolled rollover, struck-by, crush, or electrical risk.

EXCAVATOR

Compliant

Needs attention

Out of service

N/A

Execution tip: Stop when ground, utility, or line-of-fire conditions cannot be controlled.

10. Parking, isolation, maintenance safety, defects, repair, and return to service

- 55** When parking, lower the bucket or attachment to the ground or another safe position, neutralize controls, set the parking or holding system, stop the engine where appropriate, and secure the excavator against movement. **CRITICAL** EXCAVATOR
- Compliant Needs attention Out of service N/A

Execution tip: Lower attachments before leaving the excavator unattended where practical.

- 56** Before maintenance beneath raised booms, buckets, blades, or other elevated components, verify they are fully lowered or substantially blocked or cribbed against movement. **CRITICAL** EXCAVATOR
- Compliant Needs attention Out of service N/A

Execution tip: OSHA requires raised heavy equipment components to be lowered or safely blocked before workers go beneath them.

- 57** Classify each defect as acceptable, monitor, repair before use, restricted operation, or out of service according to manufacturer and project criteria. **CRITICAL** EXCAVATOR
- Compliant Needs attention Out of service N/A

Execution tip: Use clear out-of-service tags to prevent another operator from using the machine.

- 58** Tag, isolate, lock out, or otherwise clearly identify any excavator that must not be operated until a safety-critical defect is corrected. **CRITICAL** EXCAVATOR
- Compliant Needs attention Out of service N/A

Execution tip: Every critical defect needs a specific repair and verification rule.

- 59** After repair, retest the affected function and complete any required maintenance, competent-person, qualified-person, engineering, or third-party verification before release. **CRITICAL** EXCAVATOR
- Compliant Needs attention Out of service N/A

Execution tip: Retest the exact system affected by the repair.

- 60** Record the final excavator status, remaining restrictions, repairs completed, functional-test result, next inspection or maintenance date, operator, inspector, maintenance reviewer, approver, date, time, and sign-off. EXCAVATOR
- Compliant Needs attention Out of service N/A

Execution tip: Final sign-off should clearly state released, restricted, or out-of-service status.

RUN THIS CHECKLIST DIGITALLY

Turn excavator defects into out-of-service control, repair, and verified release

Capture coupler, hydraulic, undercarriage, work-zone, repair, testing, and approval evidence in Taotics.

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